

# **Fascism in Medicine and Everyday Life**

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## **Introduction**

Russian officials and media broadly use the term “fascism” relating to the Ukraine conflict, actually as a senseless swearword. There is no reason why the same term cannot be used to describe phenomena that are in a crass disagreement with medical and common ethics, often having political motivations. The main topic of this book is invasive procedures used in Russian healthcare without sufficient indications. Several related issues are delineated in separate chapters: medical education and postgraduate training, scientific misconduct, child abuse, sexual and reproductive coercion, the Ukraine conflict. Among others, the following is discussed: the overuse of gastrectomy for peptic ulcers, of thoracic surgery for tuberculosis, bronchial asthma and other respiratory diseases, overtreatment of radiation-related lesions, spleno-renal anastomosis in diabetes, excessive and compulsory treatments of alcoholics, cauterisation of cervical ectopy regardless of the presence of epithelial dysplasia. Considering the breast cancer incidence, millions of women in the former Soviet Union underwent Halsted and lately of Patey mastectomy with removal of pectoral muscles without indications, often sans informed consent. Justifications of surgical hyper-radicalism, described in this book, could be heard in private conversations among medics, for example: “The hopelessly ill are dangerous” i.e. may commit reckless acts undesirable by the totalitarian state. For example, glioblastoma patients were routinely operated on, while it was believed by some staff that the treatment was generally useless, just forcing many patients to spend the rest of their lives in bed. The training of medical personnel has been another motive. This topic is interconnected with certain features of Russian healthcare, namely paternalism, authoritative management style, occasional disregard for the principles of informed consent, professional autonomy and scientific polemics. In conditions of paternalism, misinformation of patients, persuasion and compulsory treatments are deemed permissible. Considering shortcomings of medical practice, research and education, a simple increase in funding is unlikely to be a solution. Measures for improvement of the healthcare in Russia must include participation of authorised foreign advisers. Unfortunately, current international tensions are not contributing to this development.

## **Chapter 1. Invasive Procedures with Questionable Indications used in Russia**

### **Breast cancer**

According to the author's estimates after a practice abroad (repeatedly during 1990-2008), an average size of malignant tumours in surgical specimens was larger in Moscow clinical centres than in hospitals of Western Europe, which reflects the timeliness of cancer diagnostics. Another difference: almost all mastectomy specimens abroad were without muscle. The worldwide tendency towards a more sparing breast cancer management was not followed in the former Soviet Union (SU) for decades. In the 1980s and decreasingly in the 1990s, the Halsted procedure with the removal of both *Pectoralis* muscles was a predominant method of breast cancer (BC) management (Irov 1989; Letiagin 1992; Levin and Miasnikova 1992; Pereslegin and Nikitina 1990); it was presented as the main treatment modality of BC in some textbooks and monographs published after the year 2000 (Kazachenok et al. 2005; Kovanov and Perelman 2001; Semiglazov and Topuzov 2009). The principle of informed consent was often disregarded. Patients with early cancers were subjected to mastectomies with resection of pectoral muscles without discussing potential adverse effects. A surgery could be extended to a radical (Halsted) procedure if an intraoperative frozen section examination found an early (2 cm) BC (Demidov et al. 1990). The latter operation is known to be associated with complications; millions of women underwent it in the former SU. Even more radical methods were recommended and applied (Kholdin and Dymarskii 1975). Newly developed mastectomy modalities with the muscle resection have been patented (Druzhkov and Druzhkov 1996; Tsejlikman et al. 2008). Old age was not regarded as contraindication to a radical surgery (Suspitsyn et al. 1990). In view of complications, some experts recommended the modified radical mastectomy of Patey with resection of only the smaller pectoral muscle for T1-2 laterally located BCs (Bazhenova et al. 1987; Kuzin et al. 1977, 1981). Others advocated the Halsted procedure (Datsenko and Abisheva 1977). The Patey operation is also associated with adverse effects; nonetheless, it has been broadly used in the Russian Federation (RF) in last decades. During the author's practice (1995-1998) at the pathology department of the Ostroumov hospital in Moscow, incorporating the Centre for Senology (named Mammology in Russia), almost all mastectomy specimens independently of tumour size included the smaller pectoral muscle; but the Halsted procedure was applied as well. The article dated 2007 discussed the "gradual abandonment of the Halsted operation" (Khvastunov et al. 2007). A study of neurologic symptoms after mastectomy (Shihkerimov et al. 2008) included 247 women who had undergone 121 (48%) operations of Patey and 73 (29%) of Halsted. In papers dated 2015-2022, the Patey operation was still mentioned as a routine procedure (Bektursynov and Bayduvaliev 2015; Bukkieva et al. 2022; Yarema et al. 2019); but the preservation of both pectoral muscles was finally becoming a standard. Today, the recommendations are adjusted to international patterns.

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## Diabetes mellitus

The surgical spleno-renal anastomosis with the shunting of pancreatic blood into the systemic circulation was introduced by Galperin et al. (1983, 1996a,b) and applied for the treatment of insulin-dependent diabetes mellitus. At the same time, Galperin (2017) wrote: “Diabetic patients generally tolerate surgery very poorly.” The method was applied also in type 2 diabetes (Kirnus et al. 1995; Putintsev et al. 2010). The supposed mechanism was “creating a more optimal interaction of subcutaneously injected insulin and glucagon produced in pancreas” (Galperin et al. 1996a). Of note, in patients with liver cirrhosis the surgical portocaval shunting resulted in deterioration of oral glucose tolerance (Pezzarossa et al. 1986). Diabetes mellitus was even regarded to be a contraindication for portocaval anastomosis operations (Dittrich 1964).

In a series of 415 patients, early post-operative complications were observed in 28 patients including 2 cases of sepsis, 5 of pyelonephritis, 5 of pneumonia; 2 patients died in the first post-surgery week. Ketonuria was observed in 18 patients (Diuzheva 1992), which agrees with the known fact that surgical stress may trigger ketosis in diabetics. Comparable percentages of complications were given in the article by Galperin et al. (1996a). The patients were subdivided into groups with a strong, moderate and absent effect (Galperin et al. 1996b). There was no group with deterioration, so that the assessment was probably biased. According to another report, thrombosis of the shunt was found by angiography in 27% of the patients during eight months post-surgery (Nikonenko et al. 1996). Severe acidosis was designated as a typical side effect (Nikonenko et al. 1996; Torgunakov and Torgunakov 2010). The anti-diabetic efficiency of the shunting was moderate both in humans and in the experiment on dogs, whereas a majority of the animals did not survive the diabetes induction by streptozotocin or pancreatic resection with a subsequent shunting surgery (Galperin et al. 1983). During one-year (1990) engagement in the United States, Galperin used his method on dogs and rats, deploring that there was no opportunity to apply it in humans (Galperin 2017).

By 2011, the surgical treatment of diabetes described above was still in use while a high risk of shunt thrombosis was pointed out (Torgunakov and Torgunakov 2010, 2011). During the operations, biopsies from the pancreas (~0.5 cm) and kidneys were taken. Histological descriptions included glomerulitis with mesangium interposition, relocation of mesangial cells to the periphery of capillary loops and formation of double-contoured basement membranes, presented by the authors as features of diabetic glomerulosclerosis (Severgina et al. 1994). In fact, these changes are typical for membranoproliferative glomerulonephritis. This condition, if found in a diabetic patient, is regarded as a superimposed disease potentially needing special therapy. Kidney biopsy is generally indicated for diabetics only if a renal condition other than diabetic nephropathy is suspected (more details are in Chapter 2). The misrepresentation of histological features of glomerulonephritis as traits of diabetic nephropathy may lead to inadequate therapy. Finally, renal and pancreatic biopsies are associated with risks. Invasive procedures applied within the framework of the surgical treatment of diabetes included also renal and splenic venography and celiac arteriography (Diuzheva 1992; Galperin et al. 1996a).

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## **Gastric ulcers**

Certain surgical treatments of gastro-duodenal ulcers in the former SU were different from the international practice (Balalykin 2004). According to the author's observations, gastric resections were rarely performed abroad for peptic ulcers; their volume was smaller, being usually equivalent to antrectomy. For perforated ulcers, a local excision was usually performed, while a ring-shaped specimen was sent to the pathologist. Laparoscopic repair is used increasingly these days. In Russia, primary gastric resection (2/3-3/4 or even 4/5 of the stomach), antrectomy with vagotomy, or a simple suture (depending on the patient's condition) was applied (Afendulov et al. 2006; Chernousov et al. 2016; Gostishchev et al. 2009; Potashov et al. 2005; Sazhin et al. 2014; Vachev et al. 2014). Certain papers called attention to the adverse effects of resections (Balalykin 2004; Pantsyrev et al. 2008). Admittedly, recent guidelines included laparoscopic treatments and ulcer excision along with suturing and resection among treatment options for perforated ulcers. The limited availability

of modern medical therapy was designated as social indication for the stomach resection (Balalykin 2004; Gostishchev et al. 2009). At least a fivefold decrease in gastric resection frequency in ulcer patients during last decades has been reported from some institutions (Larichev et al. 2014; Mariyko et al. 2019; Vlasov 2020), which alone indicates an overuse in the past.

The hyper-radicalism in the gastric surgery originates from Sergei Iudin (the spelling is according to the PubMed; in earlier papers spelled Sergey Yudin), who was a “passionate supporter of gastric resections in ulcer perforations” (Alexi-Meskishvili and Konstantinov 2006). According to his doctrine, the pylorus and lesser curvature must be resected at an ulcer surgery (Iudin 1991). During the World War II, Iudin was a leading surgeon of the Soviet army. He was notorious for radical operations: “Total and wide resection of devitalized tissue... resection rather than drainage and removal of bone fragments in joint wounds (including knee and hip joints)” (Alexi-Meskishvili and Konstantinov 2006); “Unhesitatingly excise muscular tissue to access fractured bone” (Yudin 1943). Former health minister B.V. Petrovsky (1989) wrote that Iudin’s radicalism in military surgery, followed by other surgeons, led to hemorrhages, extensive defects of osseous and soft tissues. Iudin’s articles recommending stomach resection in ulcer patients were published later with approving editorial commentaries (Iudin 1991); his writings are cited now as before. Resection of the stomach in case of ulcer perforation has been advocated by many experts from the former SU (Babalich 1999; Balalykin 2004; Gostishchev et al. 2009; Komarov et al. 2001; Kuzin and Chistova 1995; Repin et al. 2011; Vachev et al. 2013). As mentioned above, the continuous adherence to this method was explained by the limited accessibility of modern drugs (Balalykin 2004; Gostishchev et al. 2009). In some articles recommending resections, it was stated that the drug therapy doesn’t provide an adequate solution (Komarov et al. 2001) and ... doesn’t achieve a complete recovery”, so that resection should be performed early to avoid complications (Babalich 1999). The definition “complete recovery” seems to be hardly applicable to the condition after gastrectomy. Anyway this strategy was in disagreement with that applied in other countries (Chung and Shelat 2017). Like in many topics discussed here, recommendations are currently adjusted to international patterns. However, some questionable guidelines have remained without commentaries, so that a return to suboptimal practices cannot be excluded.

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### **Bronchial asthma**

Another method to be commented was the thoracic surgery with denervation of lungs as a treatment of bronchial asthma (Babichev et al. 1985; Gudovskii et al. 2002; Meshalkin and Alperin 1978; Smakov 1990) referred to as “the most accepted procedure” in the Instruction by the Health Ministry of RF (Health Ministry 1988). Among others, the “skeletonization” of pulmonary roots, auto-transplantation of lungs (complete removal with immediate re-implantation) (Meshalkin 1968; Meshalkin and Alperin 1978) or cross-section of trachea with



subsequent suturing (Giller et al. 1998) were applied. The theoretical ground was assumption that denervation “precludes abnormal nervous impulsation” (Babichev et al. 1985). In this connection, questionable morphological descriptions of degeneration in neural ganglia have been proposed to corroborate the denervation (Babichev et al. 1985). The operation was officially recommended by the Health Ministry whereas thoracotomy with the lung denervation was designated as “the most accepted surgical treatment for severe bronchial asthma” (Health Ministry 1988). The skeletonization method was patented and advocated for steroid-dependent and infectious-allergic varieties of bronchial asthma (Health Ministry 1988; Smakov 1999). Repeated bronchoscopies were applied post-surgery (Meshalkin and Alperin 1978). The pulmonary denervation and lung resections were recommended also for asthma cases when drug and inhalation therapy had been efficient. It was suggested that non-invasive treatment prior to the surgery must be limited in time (Health Ministry 1988). One research group performed surgical denervations in 457 asthma patients. The following complications were recorded: in 27 patients - inflammation not otherwise specified; 12 - dysphagia, vocal fold palsy or Horner syndrome; 11 - pneumonia, empyema, pneumothorax, paraplegia and 2 cases of hemiparesis; 58 complications not otherwise specified; 6 patients died within a month after the surgery (Smakov 1990). By 2002, the method was still in use (Gudovskii et al. 2002). The denervation surgery was sometimes combined with a resection of pulmonary segments or lobes deemed pathologically altered (Health Ministry 1988).

Pulmonary resections were used in bronchial asthma also without denervation, even in the cases when inhalation or drug therapy was efficient. Among indications for the surgical treatment were focal lesions: chronic pneumonia, bronchiectasis, pneumocirrhosis or “bronchitis deformans” (Uglov 1976). Certain authors stated that  $\leq 10\%$  of their asthma patients underwent resections (Sokolov et al. 1975). The surgeries were performed also in patients with extensive bilateral inflammatory or fibrotic lesions, both in exacerbations and in remissions, supposed to be indicated for a radical treatment of asthma. This concept was advocated by Fedor Uglov (1976, 1984), who claimed a “resection of infected foci” to be the aim of asthma management. The therapy was based on the belief that “in 98% of cases, the cause of asthma is focal chronic pneumonia” (Uglov 1976). The purpose of the operation was the “removal of focal infection.” Localized chronic pneumonia with bronchial lesions was by itself regarded to be indication for lung resection. Asthmatics were transferred from internistic departments for the surgical and bronchoscopic therapy. “After a course of therapeutic bronchoscopies” Uglov et al. (1976, 1984) performed lobe- and segmentectomies, resecting parts of lungs regarded by them to be pathologically changed. The surgery for pulmonary malformations in children has been commented previously (Jargin 2022).

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## **Tuberculosis**

After the successful development of medical treatment of tuberculosis (Tb) in the 1950s, the use of surgery has decreased in many countries. The priority of the former SU in this field was claimed (Kuchеров 1975; Ots et al. 2009; Perelman 1998). The surgery of Tb has been performed not only in specialized centres but also in peripheral hospitals (Kuchеров 1975; Bogush 1979). This development was associated with the name of Mikhail Perelman, who criticized the Directly Observed Treatment, Short Course (DOTS) Program by the World Health Organization and endorsed the surgical treatment (Lichterman 2013).

In the period 1973-1987, 285,000 patients with pulmonary Tb were operated in the former SU, in 1987 - 26,000, while 85% of the surgeries were lung resections (Perelman et al. 1989). In 1986-1988, ~17,500 operations for lung Tb were performed annually in RF only in specialized institutions (Perelman 1998). The incidence of Tb in 1986 and 1988 was, respectively, 43.8 and 40.8 per 100,000 (Nechaeva 2018). More than 29% of new Tb cases were operated at that time. In 2003, only 10,479 surgeries (~9% of newly diagnosed cases) were carried out, deemed insufficient (Shilova et al. 2005). In the foreign literature, corresponding figures are usually below 5% (Ahuja et al. 2012; Dewan and Pezzella 2016; Olcmen et al. 2006). In the same period, the incidence of Tb in Russia increased from 34.0 in 1991 to 90.4 per 100,000 in the year 2000 (Nechaeva 2018). Similarly to other diseases (Leon et al. 1997; Jargin 2015), this drastic increase could have been partly caused by an underestimation during the Soviet period. In the year 2006, 12,286 operations were performed in RF for pulmonary Tb, including 9300 (75.7%) resections and 399 (3.2%) pneumonectomies (Ots et al. 2009). According to another report, the forms of Tb most frequently treated by resections and pneumonectomies were cavitary Tb (52.2%) and tuberculoma (43.9%) (Kibrik and Bukharin 1976). For example, Perelman et al. reported a series of 578 operations in 502 patients including those with fibro-cavernous Tb (196 cases) and tuberculomas (161 cases). The most frequent procedures were resection (280 cases) and pneumonectomy (80). The authors concluded that "indications for surgical management of

pulmonary Tb should be generally expanded” (Perelman and Strelzov 1997). Tuberculoma was the form of Tb most often operated by Giller et al. (2013): 81 from 179 cases in one series.

Resections were recommended also for patients with inactive post-Tb fibrosis including oligosymptomatic cases (Kiseleva 1976). On the other hand, surgeries were performed in florid disseminated Tb (Meladze 1975). In some provinces of the Urals, Siberia and Volga regions, 25-40% of patients with destructive Tb were operated on (Priimak 1989). At the time of initial Tb diagnosis, surgery is now as before considered to be indicated in 15-20% of patients (Borodulina et al. 2022; Kalechenkov and Elkin 2016; Perelman 1998). According to another paper, indications for surgery were ascertained in 20-30% of patients at the time of diagnosis and/or in those with active Tb (Perelman et al. 2002). In Ekaterinburg and surrounding province (years 2006-2008), indications for surgery were found in 1784 from 4402 (40.5%) patients with pulmonary Tb, while 1079 (24.5%) were operated. Among reasons of the purportedly low surgery rate were the patients’ non-compliance and unavailability (Motus et al. 2009). According to the recent handbook, ~6.4% of Tb patients are operated in RF; but “in some provinces, which cooperated with the Perelman’s Institute... the percentage has been much higher” (Giller et al. 2020). Despite the lack of clinical trial data on efficacy of adjunctive surgical therapy of Tb, some countries of the former SU have continued performing many lung surgeries, predominantly resections (Benito et al. 2020; Giller et al. 2013; Kempker et al. 2012).

Tuberculoma (>2 cm, also in children) has been generally regarded in Russia as an indication for surgery. Fibrocavitary Tb was designated as an absolute indication for surgery. Tuberculoma has been a frequent indication in children and adolescents with Tb (Giller et al. 2016, 2020). Tuberculomas >1 cm were routinely operated on (Gur’ianov et al. 2000; Pilipchuk et al. 1974; Uspenskii et al. 1986), which is contradicting to the international practice. There is an opinion that potential instability of tuberculoma does not justify thoracic surgery and that asymptomatic patients with stable solid lesions do not require therapy. Nonetheless, tuberculoma was the most frequent indication for lung surgery in Tb patients (44.2%; in children – 40.7%) at the leading institution - Sechenov Medical University in Moscow (Ots et al. 2009; Martel 2016); while at some hospitals this percentage reached 50-80% (Valiev et al. 2014). Now as before, tuberculoma occupies first places among Tb forms that are operated on (Borodulina et al. 2022). The surgical treatment of tuberculoma was recommended also for cases with extensive lesions in remaining pulmonary tissues (Health Ministry 1983). Bilateral resections were performed for various forms of Tb including tuberculomas on both sides (Andrenko et al. 2000; Porkhanov et al. 1998; Repin 1990). A study from the above-mentioned Sechenov University reported 771 lung operations, including 168 pneumonectomies, 181 lobectomies, 180 other resections, performed in 700 Tb patients, up to 4 operations/patient. Postoperative complications were recorded in 100 (12.9%) patients and lethal outcomes - in 12 (1.5%) (Ots 2012). Another example from the same Academy: among 60 operated Tb patients the complication rate was 37%, mortality - 5%; 18.3% of the patients were released from hospital with persisting complications (Kulbak et al. 2004).

Resections for Tb were performed by some experts without preceding attempt of medical treatment or within one month after the diagnosis, when medical therapy could have been efficient (Gur’ianov 2000; Zyskin 1991). One of the arguments in favour of the early surgery was non-compliance increasing with time (Gur’ianov 2000) as the patients collected knowledge and advice. Apparently, the frequency of adverse effects has been underestimated due to the limited follow-up. Lung operations were performed and recommended also for aged patients with comorbidities (Gorovenko et al. 1975; Polianskii 1999; Sokolov 1975,

1978). Sokolov (1975) found indications for surgery in 210 from 289 (72.6%) Tb patients 50-73 years old and operated 180 (62.2%) of them, 144 operations being lung resections. Among the latter 144 patients, 93 (66.4%) had cavitating disease and 43 (30.8%) - tuberculoma. A post-surgery reactivation of Tb was recorded in 8.6% of the cases, fistula - in 27.2%, atelectasis - 20%, pneumonia - 5.7%, pleural empyema - 3.6%, other complications - 12.9%; 8 (5.7%) patients died after the operations. In the monograph based on 233 lung resections in Tb patients older than 50 years (mortality - 5.4%), Gorovenko et al. (1975) reasonably concluded: "It is important that a surgery doesn't provoke an unfavourable outcome." According to another report, tuberculoma was the most common indication, and lobectomy - the most frequent operation in elderly Tb patients, whereas potential contagiousity was among arguments in favour of the surgical treatment (Sokolov 1978). Statements of this kind can be found also in recent papers e.g.: "Surgery in patients with tuberculomas is recommended to reduce their infectiousness" (Yablonskii 2019). According to Giller et al. (2013), a reduction of Tb incidence and mortality can be achieved only by means of a "radical sanitation" of contagious patients also without destructive pulmonary lesions. Note that tuberculoma is usually not contagious. It seems to be evident that potential contagiousity does not justify a thoracic surgery. Tendentious citation is sometimes used to corroborate active surgical tactics (Jargin 2023; Pekhtusov 2022). One more citation: "Active surgical sanitation of infectiously dangerous patients with pulmonary Tb contributes to the rapid improvement of epidemiological indicators" (Pekhtusov 2022). No mentions of informed consent have been found in this connection.

Out of 1,311 Tb cases operated at the Phthisiopulmonology Institute in St. Petersburg, 241 had Tb recurrences and 203 underwent repeated interventions (El'kin et al. 2004). Postoperative recurrences were regarded as indications for repeated surgeries up to concluding pneumonectomy (Repin 1990) and resections of the remaining sole lung (Korneevskii 1975). For example, repeated resections on both sides with a concluding pneumonectomy along with 52 bronchoscopies were performed in one case (Kravchenko et al. 2003). Bilateral lobectomies or pneumonectomy plus contralateral "sparing" resection were deemed indicated for patients with a Tb lesion on one side and non-specific inflammatory or fibrotic lesions in the contralateral lung (Niiazov 1976). Bilateral resections and bilobectomies were performed in various forms of Tb including tuberculomas (Andrenko et al. 2000; Korneevskii 1975; Niiazov 1976; Ots 1991; Porkhanov et al. 1998; Repin 1990). Resections were deemed applicable also in cases with severe respiratory insufficiency (Bogush and Kalinichev 1979; Bogush et al. 1983; Korneevskii 1975; Naumov and Karaeva 1993).

It is recommended to "explain to the patients in popular form that surgery is necessary" (Polyansky et al. 2021) instead of objective depiction of pros and cons. The role of surgery in Tb remains controversial. The message of this chapter is that patients should not undergo operations to merely comply with doctrines. Evidence-based clinical indications must be determined individually, the patients being objectively informed on potential benefits and risks. The informed consent started to be mentioned relatively recently in papers from Russia reporting research using invasive methods, for example in a bronchoscopic study of paediatric asthma, where a consent of parents was regarded to be sufficient (Fedorov et al. 2005). Of note, the principle of informed consent or assent is applicable also to adolescents and children.

The outpatient treatment of Tb, usual in other countries, is supposed to be hardly applicable in RF (Bogadel'nikova et al. 2000). According to the governmental Regulation No. 378 of June 16, 2006, patients with contagious Tb are not permitted to reside in one apartment with other

people. As per the Federal Law No. 77 “Prevention of the Tb spread” of June 18, 2001 (amended 2013), “patients with contagious Tb, repeatedly violating the anti-epidemic regime, and those evading examinations for Tb *or* (emphasis added) the therapy, are hospitalized for obligatory examination and treatment.” It is specified by the same Law that the principle of informed consent is not applicable under these circumstances, and that Tb patients must undergo prescribed examination and therapy. The non-observance of this law may lead to a criminal persecution. A survey found more than 6000 legal proceedings in the period 2004-2008 whereas 3163 Tb patients were compulsorily hospitalized (Bogorodskaya et al. 2009). In one series, 463 judicial cases resulted in 421 court decisions to hospitalize Tb patients (Lomova et al. 2009). Compulsory treatments are generally at variance with the international practice and regulations. According to The World Medical Association, neither the statutory exceptions to the principle of informed consent nor the conditions of required care allow legally binding measures against patients refusing a treatment or hospitalization (Bouvet and Le Gueut 2013). The consent for invasive procedures and chemotherapy is of particular importance in conditions where an overtreatment may occur. The author agrees to the viewpoint that informed consent is grounded in the principle of bodily integrity, thus being not obligatory for non-invasive procedures such as sputum samples collected through expectoration (Coleman et al. 2012). Excessively rigorous interpretations of the informed consent are potentially harmful as they put non-invasive tests into one ethical category with invasive manipulations potentially resulting in less responsible attitude to both.

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## **Alcoholism**

According to official instructions, indications for surgery were broader in alcohol-dependent than in other Tb patients (Health Ministry 1987). In case of alcoholism, the surgical treatment was recommended to be implemented earlier, after a shorter period of medical therapy (Pilipchuk et al. 1974). Perelman. insisted on early surgery in Tb patients with alcohol dependence, and operated them also in the absence of demonstrable Tb infection (e.g. a series of 49 patients with tuberculoma plus 41 with cavernous Tb, whereas micobacteria were demonstrated in 55). At the same time, it was noticed that alcoholics have more frequent post-surgery complications (Perelman et al. 1983). Bronchoscopy was applied in cases with bronchitis (Entin 1990), the latter being frequent among alcoholics in Russia due to smoking and the risk to sleep down at a cold place. Along with other complications, vocal cord injuries were observed after repeated bronchoscopies sometimes performed in conditions of insufficient procedural quality. It was noticed that vomiting triggered by apomorphine as aversive therapy of alcohol dependence provoked hemoptysis in patients with Tb (Entin 1990).

The following treatments were applied to alcoholics: prolonged intravenous drip infusions, sorbent hemoperfusion, pyrotherapy with sulfozine (Entin, 1990; Gavrilenko 1989; Ivanets and Vinnikova 2011; Jargin 2022; Krut'ko 1990; Makhov et al. 1996; Shabanov 2015); references on organ biopsies without clear indications are in Chapter 2. Intravenous infusions were recommended for patients with alcoholism including moderately severe withdrawal syndrome: 7-10 infusions daily, sometimes combined with intramuscular injections (Ivanets and Vinnikova 2011; Galankin et al. 2003; Health Ministry 1998; Shabanov 2015; Nikitin 1990). The intravenous detoxification was regarded to be “indicated to nearly all alcohol-dependent patients, especially to those with prolonged withdrawal syndrome” (Entin 1990), also in the absence of (severe) intoxication (Livanov et al. 2000). Recommendations of intravenous infusion therapy of alcohol intoxication and withdrawal syndrome with both crystalloid and colloid solutions can be found also in recent instructive publications (Abdullaev and Utkin 2018; Gromova and Torshin 2018; Vinnikova et al. 2018). Apparently, the infusion therapy has been overused not only in alcoholics but also generally. Recent publications suggested a decrease in volumes of intravenous infusions (Prelous 2022). The research found many cases with symptoms of excessive infusions, fluid overload, pulmonary or generalized edema (Berbentsev 2022). In particular, certain dextran solutions (polyglucin, rheopolyglucin) were broadly used in Russia before adverse effects have been more fully appreciated (Mokeyev 2022; Stukanov et al. 2009). Some methods were patented e.g. infusion therapy and transcerebral electrophoresis of magnesium as a treatment of alcohol withdrawal syndrome (Chitalov and Zhukova 2008; Galankin et al. 2003; Panin 2000; Sosin et al. 1987). As per the Cochrane review, there is no sufficient evidence to decide whether or not magnesium is useful for the therapy of alcohol withdrawal syndrome (Sarai et al. 2013). Excessive intravenous supply of magnesium can cause adverse effects. Fatal intravenous overdoses of magnesium in alcoholic patients were recorded (Vissers and Purssell 1996). Besides, various intramuscular injections were recommended: magnesium sulphate, sodium bromide and thiosulphate, subcutaneous infusions of saline and insufflations of oxygen;

extracorporeal ultraviolet irradiation of blood, Unithiol, Dimercaprol, sorbent hemo- and lymphoperfusion etc. (Gavrilenko 1989; Health Ministry 1987; Livanov et al. 2000; Nikitin 1990; Garbusenko et al. 2013; Styagov and Timoshok 1991; Syropiatov et al. 2000). Other treatments disagreeing with the international practice have been applied, e.g. antipsychotic drugs (phenothiazines, haloperidol) for alcohol dependence in the absence of psychosis (Bazhin 1976; Mendelevich and Zalmunin 2015). Among contraindications, synergism between certain antipsychotic drugs and alcohol potentially aggravating liver injury, should have been considered (Weller and Preskorn 1984).

The recommended duration of the intravenous detoxification was 5-12 days, or even 14-25 days according to some instructions (Entin 1990; Filatov et al. 1976; Livanov et al. 2000; Perelman et al. 1983); a more recent publication recommended 2-3 days (Abdullaev and Utkin 2018). This is generally at variance with the international practice. Alcohol and its metabolites are eliminated spontaneously while rehydration can be usually achieved per os. Long-lasting drip infusions are uncomfortable; some patients regarded them as torture. Apparently, ideation of punishment coupled with irresponsibility and sadism has played a role in some personnel. It was known that the attitude to alcoholics was less responsible with lower procedural quality assurance than for other patients. Repeated infusions, endovascular and endoscopic manipulations lead to a transmission of viral hepatitis, which is unfavourable especially if combined with alcohol-related liver damage. Rudoi et al. (1994) reported that ~60% patients of one “phthisio-narcological” institution for compulsory treatment broke out; over 50% of them were returned by the police (Rudoi et al. 1994). The duration of stay in such institutions was a year or longer (Entin 1990). The compulsory treatment has been rooted in laws and regulations (Entin 1990; Grishko 1991). In 1974, chronic alcoholism was officially declared to be a ground for enforced treatment; the regulations were made stricter in 1985, making compulsory hospitalization and therapy of chronic alcoholics independent of their anti-social behavior. This practice was found in the 1990s to be contradictory to human rights. Nonetheless, some writers recommended restoration and further expansion of the compulsory treatment system (Bogorodskaya et al. 2009). According to a survey, 62.6% of specialists in addiction medicine supported compulsory treatment of alcoholism (Mendelevich 2016). Enforced therapy of socially dangerous alcoholics is stipulated by Articles 97 and 98 of the Criminal Code of RF; besides, there is a legal mechanism enabling compulsory treatment of alcoholics in prisons (Maslennikova 2023).

The incidence of lethal poisonings by legally sold alcoholic beverages increased considerably in the early 1990s (Nuzhnyi et al. 1998). Sales of falsified beverages through legally operating shops and kiosks occurred generally with the knowledge of authorities. Technical alcohol was added to beer, wine and other beverages, which could be smelled and tasted. Its astringent taste is known as technical alcohol has been purloined from some factories and scientific institutions. Cases e.g. of organochloride poisoning from the contents of vodka bottles are known. Exaggeration by some authors of the non-beverage alcohol consumption shifts responsibility for poisonings onto the consumers, who allegedly prefer to drink surrogates (Razvodovsky 2013). According to our observations and generally known facts, drinking of alcohol-containing technical liquids and perfumery decreased abruptly after the failure of the Anti-Alcohol Campaign (AAC) in 1989, when vodka, beer and other beverages have become easily available and relatively cheap. After AAC, the average life expectancy in Russia decreased especially in men. For the period 1993-2001, this figure was estimated to be around 58-59 years (Davydov et al. 2007; Nemtsov 2009; Ryan 1995). Among the causes of the enhanced mortality have been limited availability of modern health care, chronic diseases

often left untreated, late detection of malignancies, offences and crime against alcohol-dependent people resulting in homelessness and premature death (Jargin 2015a,b).

Numerous poisonings by legally sold alcoholic beverages have been reported. For example, in 2006, an outbreak of toxic liver injury was reportedly caused by disinfectant Extrasept-1 sold in vodka bottles in different regions of Russia (Nuzhnyi 1995). Apart from ethanol, this liquid contained 0.08-0.15% of diethyl phthalate and 0.1-0.14% of polyhexamethylene guanidine hydrochloride (PHMG). The reported number of poisonings with marked jaundice during the period August-November 2006 was 12,611 cases, among them 1189 lethal cases (Luzhnikov 2014; Ostapenko et al. 2011). Unrecorded figures were certainly higher. Histologically, “cholestatic hepatitis with a severe inflammatory component” was observed (Ostapenko et al. 2011). However, the toxicological assessments of PHMG and related polyhexamethylene biguanide (PHMB) have not shown any strong hepatotoxicity. Both substances are used worldwide as antimicrobials in swimming pools (Asiedu-Gyekye et al. 2014, 2015). As for diethyl phthalate, its acute toxicity is low. Considering the above, there is a suspicion that many cases including the mass poisoning in 2006 were caused by organochlorides. In particular, carbon tetrachloride, used in the dry cleaning, could have caused liver injury; there were rumors about it. Importantly, the toxic liquid was legally sold in shops and kiosks in vodka bottles (Luzhnikov 2014), which has been veiled by some writers creating an impression that consumers deliberately bought the disinfectant for drinking: “This outbreak was caused by the consumption of antiseptics with chloride compounds due to the deficit of other non-beverage alcohol. *The victims had yellow eyes* (emphasis added)” (Khaltourina and Korotayev 2016). Apparently, organochlorides were meant under the “chloride compounds”. Note that there was not the “deficit of other non-beverage alcohol” (Khaltourina and Korotayev 2016) but a temporary deficit of vodka caused by the elevation of excise duties in 2006 (Ivanets and Vinnikova 2011). The shortage was compensated by surrogates sold in vodka bottles through legally operating shops and kiosks (Luzhnikov 2014).

Remarkably, the rate of suicides without measurable blood alcohol concentration (BAC) slightly increased in Belarus after the start of the AAC (1985 - 6.25; 1988 - approximately 6.6 per 100.000 of residents), then decreased to 6.1 after the AAC, which coincided with the peak of optimism at the beginning of the reforms around 1991. Thereafter, both the BAC-positive and BAC-negative suicide rates increased considerably, the latter up to approximately 10.4 in 2003 (Razvodovsky 2016). These figures indicate that dynamics of suicides depend not only on the amounts of consumed alcohol, but also on social factors. It can be reasonably assumed that the increase in the suicide rate after 1991 has been partly caused by deterioration of the social assistance, when many unemployed people were abandoned in a desperate condition (Jargin 2015b). The welfare in Russia is underdeveloped, unemployment benefits being low and difficult to obtain on the long run, while a disdainful attitude at the job centres has become a habit.

Finally, it should be mentioned that conditions in Russian homes for the aged and psychiatric hospitals lag behind their Western analogs. Experience of foreign countries must be studied in this field; it is necessary to invite authorized foreign experts and advisers. At the same time, clinical attachment of Russian doctors abroad should be encouraged. Improvements of professional skills and remuneration of personnel in Russian homes for the aged and psychiatric hospitals is necessary, whereas the question of patients' rights in such facilities should not be forgotten. The society must care of its unprotected members, including those suffering of alcoholism and alcohol-related dementia.

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## **Glioblastoma**

Around 1980 the author worked as a nurse at the neurosurgery of the Botkin hospital in Moscow. Patients with glioblastoma (GBM) were routinely operated on, while it was believed by some staff that the treatment was generally useless, just forcing many patients to spend the rest of their lives in bed. The directive to apply the largest possible radical operations for gliomas was issued at the 1959 and especially 1966 Moscow Conferences of Neurosurgeons (Zozulya 1968). Advanced age was not regarded to be an obstacle to the radicalism (Taleisnik 1968). Later on, microsurgery, intra-operative imaging and other modern methods lead to a reduction in the surgical morbidity. However, despite extensive research, prognosis has not changed significantly in the past decade (Oberheim Bush et al. 2019). Arguments against resection stem from the invasiveness of GBM, which cannot be totally removed; in addition, there might be a tumour cell spreading due to the operation, new neurological deficits and other complications (Iacob and Dinca 2009). Maximum resection using microsurgical techniques as safely feasible is considered standard of care, although the role of surgery has been difficult to define in controlled clinical trials (Weller et al. 2019). The evidence is weak in terms of both the number of trials and their robustness (Volovici et al. 2022). The retrospective design of studies has raised concerns about selection bias (Fogg et al. 2023); that is, some tumours are more resectable than others, and these tumours also may be inherently less aggressive, the impact of surgery possibly being an epiphenomenon (Schiff et al. 2019). It is often argued that a prerequisite of glioma diagnosis is resection or biopsy, both methods being associated with risk. Of note, intracranial malignancy can be diagnosed in some cases by imaging and “liquid biopsy” (Balana et al. 2022). Improvements of preoperative diagnostics must limit indications for the trepanation.

The volume of residual tumour after surgery negatively correlates with the outcome; but it has remained unclear whether the extent of resection improves the outcome or whether tumours amenable to gross total resection have on average less malignant course (Weller et al. 2019). If even surgical outcomes are deemed good, some patients remain with neurocognitive decline or otherwise deterioration of the life quality (Bonosi et al. 2023). Although evidence suggests that surgical excision improves the outcome in most cases, it is often associated with morbidity (Youngblood et al. 2021). There are indications that standard therapy including surgery may be not in a patient’s best interests (Walker and Kaye 2001). Without surgery, some patients receiving symptomatic palliative therapy could use the remaining months to complete their tasks. The palliative care increases the number of patients who survive more than 2 years approximately 3-fold compared with those declining the treatment in whole or in part (Pando et al. 2023). Existing methods of GBM management are not questioned here. It is important that patients (or caregivers if the patient’s thinking capacity is impaired) must be objectively informed about potential benefits and adverse effects of different treatments. Signed informed consent is mandatory for all surgical candidates (Manrique-Guzmán et al.

2017). Tacit consent must not be supposed, in particular, regarding end-of-life decisions (Berthold et al. 2022). All the above is of particular importance for the elderly. For aged patients with newly diagnosed GBM, current recommendations include surgery; however, some studies indicated that in patients aged 65 years and older, median overall survival is only modestly improved or that there is no improvement with resection compared to biopsy (Fogg et al. 2023; Minniti et al. 2019). Treatment strategies should be balanced against patient-specific factors and quality-of-life concerns (Nunna et al. 2021).

Many patients and their relatives access information on the Internet. The information available online is not monitored (ReFaey et al. 2018). In Russia, media tend to trivialize risks and discomfort associated with surgeries and other invasive procedures. Some medical men on YouTube claim that new techniques enable to radically remove deep GBMs without damaging brain structures: <https://www.youtube.com/watch?v=-0GLCfdMv10>; <https://www.youtube.com/watch?v=l2kSeb92jpY> (accessed January 11, 2024). Unlike other countries, public libraries are rarely used and generally contain no professional medical literature. Medical libraries are hindered from using by the general public, including even retired doctors, by unfriendly staff and technical difficulties (Murphy and Jargin 2017). Some professional publications recommending invasive procedures apply misquoting, for example: “The average life expectancy for malignant gliomas in patients receiving only conservative therapy was 9 weeks - 6.6 months” (Martynov et al. 2011) with references (Fazeny-Dörner et al. 2003; Kreth et al. 1993; Simpson et al. 1993). However, in these sources the survivals were longer. Other examples of misquoting were discussed elsewhere (Jargin 2013, 2020, 2023). Surgeries are often presented by media as something a priori beneficial, conducive to good convalescence; while side effects, risks and procedural quality are not mentioned. It has been reasonably recommended that medical institutions and professionals must work to produce more reliable content in order to improve the availability of credible health information for patients (ReFaey et al. 2018).

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### **Cauterization of ectocervix**

Electro- and thermocoagulation of cervical ectopy, regardless of the presence of epithelial dysplasia, has been routinely applied in Russia. It should be commented that cervical ectopy or ectropion is called pseudo-erosion (colloquially erosion) in Russia, while the term ectropion is mainly used for the cervix eversion after delivery.

The ectopy per se was regarded to be precancerous or “predisposing” to cancer (Abdushukurova and Maidanik 1981; Petchenko 1965; Sivochalova 1984; Timoshenko 1988). Cylindrical endocervical-type epithelium and mucous glands within the ectopy were designated as “pathological tissue” that must be removed (Kiriushchenkov 1986). It was also speculated that cervical pseudo-erosions contribute to infertility and complications of pregnancy (Milianovskii and Senchuk 1990). Cervical erosions and pseudo-erosions were found at mass prophylactic checkups and treated by electro- or thermocautery (Lesiuk 1963; Bokhman 1985). It occurred in accordance with the Soviet-time concept of prophylaxis priority in the healthcare (Abdushukurova and Maidanik 1981). It was recommended to start the treatment of a pseudo-erosion possibly early, while large lesions were to be treated by “diathermoconization” by means of an electrocautery electrode (Petchenko 1965; Timoshenko 1988), a procedure associated with complications (Bychkov et al. 1990). It should be noted that according to the international literature, in many women during the reproductive period, the mucin-secreting columnar epithelium of the endocervix is present on the cervical portio, forming the endocervical ectropion or cervical ectopy, which is considered to be physiological (Machado Junior et al. 2008).

At the same time, Pap smears have been performed infrequently and not up to the quality standards, cervical cancer being diagnosed relatively late (Syrjänen et al. 2002). Ablative methods are advertized and recommended by some contemporary Russian-language literature; images and references are in (Jargin 2024). For example, relapsing endocervical ectopy without epithelial dysplasia has been presented as an indication for cryotherapy although this method impedes histological examination (Damirov 2023). Other experts recommend laser, cryo- or electrocoagulation for acquired endocervical ectopy (Gantsev 2014). For leukoplakia without cell atypia a loop excision is recommended (Kuznetsova et al. 2017). Some medical

practices possess only one device for ablative therapy (Damirov 2023) and use it occasionally with questionable indications.

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## Discussion and conclusion

Factors contributing to the persistence of suboptimal practices include a partial isolation from the international scientific community, shortages of medical education, unavailability of many internationally used handbooks (Jargin 2013; Senokosova 2019). Some translations of foreign manuals are of low quality. Thanks to the Internet, foreign literature is largely available in Russia these days, many guidelines being adjusted to international standards. However, some published instructions have remained without due commentaries, so that a comeback to suboptimal practices is not excluded. The lacking professional autonomy has contributed to the persistence of suboptimal and outdated methods in the healthcare (Danishevski et al. 2009). Some colleagues encountered impediments to their careers when they did not collaborate in dubious research and practice. Trimming of statistics has been not unusual (Jargin 2020). In conditions of paternalism, misinformation of patients, persuasion and compulsory treatments are deemed permissible (Mikirtichan et al. 2022). Suboptimal practices have been used as per instructions by healthcare authorities and leading experts' publications. As mentioned above, millions of women in the former SU underwent Halsted and lately of Patey mastectomy with removal of *Pectoralis* muscles without indications, often without informed consent. Patients were subjected to mastectomies with resection of muscles without discussing the extent of operation and potential adverse effects. Justifications of surgical hyper-radicalism, described in this book, could be heard in private conversations among medics, for example: "The hopelessly ill are dangerous" i.e. may commit reckless acts undesirable by the state. For example, glioblastoma patients were routinely operated on, while it was believed by some staff that the treatment was generally useless, just forcing many patients to spend the rest of their lives in bed. Some authors wrote about fascism in oncology (Lebedev 2023). The training of medical personnel under the imperative of readiness for war has been another motive. Finally, the obstacles to the import of drugs and medical equipment should be mentioned. Domestic products are promoted sometimes despite questionable quality and possible counterfeiting. Today, the economical upturn enables acquisition of modern equipment; and scientific research is encouraged by authorities. Under these circumstances, the purpose of this chapter was to remind that, performing surgical or other invasive procedures, the risk-to-benefit ratio must be kept as low as reasonably achievable.

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## **Chapter 2. Renal biopsy**

Renal biopsy (RB) is a valuable diagnostic tool; it was broadly used in the former Soviet Union (SU). RBs were taken for research from patients with glomerulonephritis (Gn), pyelonephritis, amyloidosis, renovascular hypertension (from both kidneys in some studies) (Paltsev et al. 1982, 1986, 1989; Romanenko et al. 1989; Shkhvatsabaia et al. 1986; Turpitko et al. 1989), essential hypertension, in certain studies with mild proteinuria and/or hematuria (Arabidze et al. 1989; Shkhvatsabaia et al. 1986; Nichik et al. 2006), alcoholism (Serov et al. 1985; Nikolaev et al. 1986; Lebedev et al. 1984, 1986; Serov and Lebedev 1988; Serov et al. 1982; Tarasova and Beloborodova 1998, 2003; Makhov et al. 1996), diabetes mellitus (Mukhin et al. 1990), rheumatoid arthritis (Khamishon et al. 1989), and from children with urinary tract anomalies including those combined with hydronephrosis or pyelonephritis (Cheskis et al. 2006; Kozhukhova and Klembovski 1979; Leonova et al. 2007; Severgina et al. 2011). The electron microscopy was not always used for diagnostics. Nevertheless, about one third of the biopsy cylinder was embedded in epoxy resin. The semi-thin epoxy resin sections were made for research but were not used for diagnostics, the latter being performed mainly on the basis of paraffin sections and immunofluorescence.

### **Pyelonephritis**

In the studies by Kirillov (1979, 1980), excisional RB were sampled during kidney-preserving operations such as lithotomy from patients with chronic or acute (including purulent) pyelonephritis. In the international literature, pyelonephritis is not listed among conditions where RB is indicated, while acute inflammation, infection and hydronephrosis are generally considered to be contraindications. In particular, taking wedge biopsies from kidney in acute pyelonephritis is obviously associated with a risk of abscess formation. In the study by Paltsev (1982), RBs were collected from patients with chronic pyelonephritis and hydronephrosis, while conclusions were based on linear correlations between ultrastructural morphometric and clinical indices. However, statistical significance of the correlation coefficients in this and some similar studies was overstated. A comparison with the reference tables (Lentner 1980) demonstrated that many claimed P-values were overstated i.e. too high for the given values of the correlation coefficient and the number of correlation pairs in (Paltsev 1982; Paltsev et al. 1984; Serov and Paltsev 1984; Mukhin et al. 2009); more details are in (Jargin 2009). In a more recent study, “cytomembranes of the interstitial tissue of renal medullary layer” were studied in core RBs collected during lithotomies from patients with urolithiasis and secondary pyelonephritis (Kazeko et al. 2005). The presence of “medullary layer” indicates that the biopsies were quite deep with a risk of calyx perforation. Core RBs were taken from patients with pyelonephritis also by other researchers (Shulutko et al. 1993). Fine-needle RB in acute pyelonephritis was performed and recommended in (Diusiubaev and Shalashov 2007).

### **Alcoholism**

Among patients with alcoholism, biopsies were taken from kidneys, pancreas, liver, lung, salivary glands, stomach and skin, repeatedly in some cases (Lebedev et al. 1984; Serov and Lebedev 1988; Makhov et al. 1996) (more details are in Chapter 1). It was concluded on the basis of a series of RB studies that a generalized cytoskeleton abnormality with accumulation of filaments of intermediate type in macrophages, epithelial and other cells is typical for the cell damage by ethanol or the “alcoholic disease” (Lebedev et al. 1984; Serov and Lebedev

1985, 1988). It is known that Mallory bodies, seen in alcoholic hepatitis and some other liver conditions, contain filaments of intermediate type; however, generalizations as per Lebedev and Serov (cited above) have never been confirmed by other researchers. In any case, the cytoskeleton can be studied in experiments or post mortem. Another example: RBs were collected from 40 patients with chronic alcoholism and nephritic symptoms, whereas “intracapillary proliferative glomerulonephritis” was diagnosed in all cases. In a later study by the same researchers, the histopathological findings in 40 from 43 patients with alcoholism and nephritic symptoms were morphologically classified as membranoproliferative (mesangiocapillary) Gn; while in 29 from 31 patients with nephritic symptoms without alcoholism “fibroplastic” Gn was diagnosed (Tarasova and Beloborodova 1998, 2003). The striking difference between the two groups is indicative of the data trimming. Other invasive procedures (celiacography, endoscopic cholangiopancreatography etc.) were applied in alcoholics without clear indications (Makhov et al. 1996); more examples are in Chapter 1. In the author’s opinion, repeated biopsies from different organs, doubtful morphological descriptions and interpretations, call in question the indications for RB at least in a part of the studied patients.

### **Glomerulonephritis (Gn)**

In the Russian-language literature RB has been generally regarded to be indicated in suspected Gn (Borisov et al. 2009; Lozinskii 2007; Shilov et al. 2002) or “always when it can influence therapy or estimate prognosis” (Karpunina et al. 2023). In the internationally used handbooks, RB in isolated proteinuria and/or microhematuria without abnormal urine sediment or signs of progressive renal disease is generally regarded to be not indicated. Indications for RB are sometimes formulated more liberally; but an obvious prerequisite must be a high quality of morphological examination. In Russia, RBs were sometimes collected from patients with “inactive nephritic” or latent clinical forms of supposed Gn i.e. in cases of isolated proteinuria and/or hematuria (Chebotareva et al. 2014; Ratner et al. 1987a, 1997; Shilov et al. 2002; Varshavskii et al. 1992). At the same time, the classification of Gn has been different from that used internationally, which interfered with the implementation of recommendations from the international literature. For example, Gn classification applied in the former SU did not consider IgA nephropathy as a separate entity; it was not mentioned even in the article from the Sechenov Academy dedicated to the “hematuric form” of Gn (Ratner et al. 1990). IgA-nephropathy was usually diagnosed on RB as mesangioproliferative Gn (MG) and treated with corticosteroids and/or cytotoxic drugs (Krasnova et al. 1991; Poliantseva et al. 1990; Ratner et al. 1979, 1980, 1987b, 1996; Serov et al. 1992; Shilov et al. 2000; Tareeva et al. 1989). In later editions controversies can be found; for example, in the textbook by Stepanov (2013), IgA nephropathy and Berger’s disease are discussed separately and different treatments are recommended for them. IgA nephropathy as a separate entity was criticized as a “manifestation of a classificational crisis” (Pyrig et al. 1989). Original classifications of Gn were proposed (Varshavskii et al. 1999). It should be mentioned apropos that in the latter study morphometric methods proposed by Iargin (1985, 1986) were used without references. In the “National Manual”, probably the most authoritative Russian-language edition in nephrology, IgA-nephropathy and MG are discussed in one chapter titled “Mesangioproliferative (IgA) glomerulonephritis” (from Russian): “The term IgA nephropathy is used to designate an entity, the morphological equivalent of which is MG” (Shilov 2014). This is partly at variance with the known fact that glomeruli in IgA nephropathy may be normal at light microscopy or show segmental mesangial proliferation confined to some glomeruli (focal proliferative Gn), diffuse mesangial proliferation (such as

in MG) or, rarely, crescentic Gn. Healing of focal lesions can result in focal glomerulosclerosis.

Comparisons of percentages of glomerular diseases diagnosed by RB in Moscow and Rostock in Germany (Table 2-1) (Serov et al. 1986; Nizze et al. 2003) are suggestive of the regular overdiagnosis of Gn in the former. Old equipment, such as Reichert microtomes from the 1930s, was used in many institutions. The author of this book participated in the research by Paltsev et al. (1986, 1989) using epoxy resin sections cut by a modern LKB pyramitome with glass knives; after that he found it difficult to examine diagnostic paraffin sections, less clearly visualizing basement membranes and mesangial matrix. The paraffin slides were relatively thick, the thickness being uneven. Occasionally overstained thick sections can make impression of a glomerular capillary wall thickening. This is apparently the reason why membranous Gn was diagnosed in Moscow more than twice as frequently as in Rostock (Table 2-1).

**Table 2-1.** Percentages of glomerular diseases diagnosed by RB in Moscow and Rostock (Serov et al. 1986; Nizze et al. 2003)

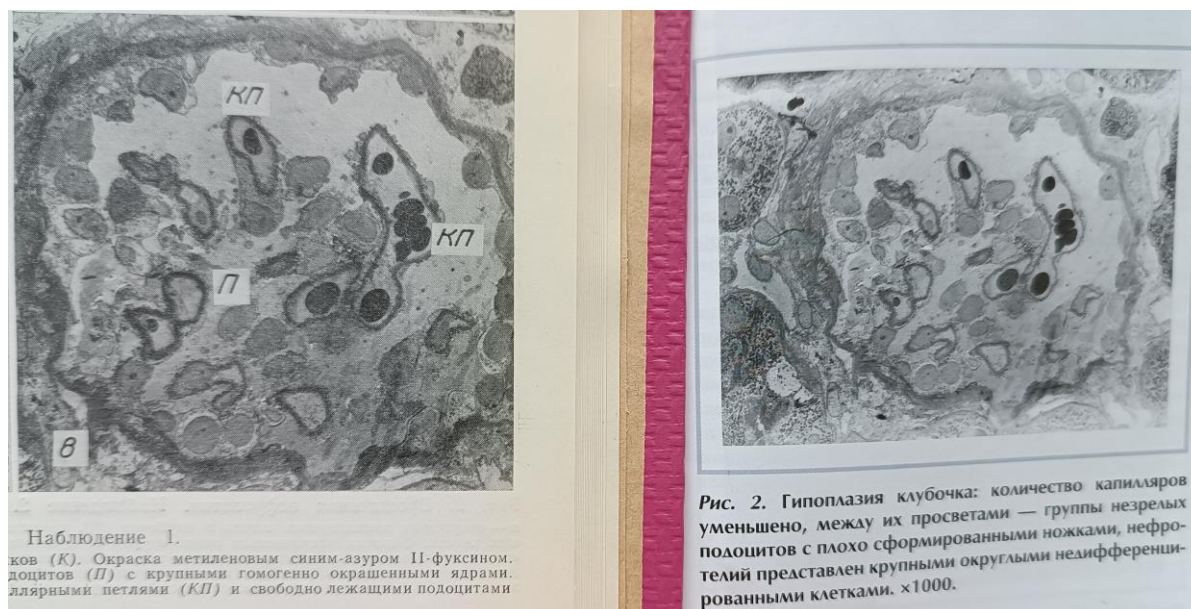
Condition	Moscow	Rostock
Diffuse Gn	81.7	59.3
MG	55.5	40.2
Membranous Gn	9.2	4.1
Minor glomerular abnormalities	7.1	20.8 (1978-83) 30% (1990-99)

The diagnosis of MG was used broadly, encompassing 49-60.8% of all Gn cases diagnosed by RB (Dzhanaliev et al. 2002; Ratner et al. 1983, 1987c). Epoxy resin sections and silver impregnation were not used for the diagnostics, while electron microscopy was applied only occasionally in some institutions. By means of these methods, the collecting box of MG could have been partly sorted out, excluding from it some cases morphologically bordering on the norm i.e., isolated proteinuria and/or hematuria without renal or systemic disease, not requiring immunosuppressive therapy. In such cases, histologically are often detected only minor glomerular abnormalities: mild mesangial widening and hypercellularity, scarce deposits of immunoglobulins and complement. In conditions of insufficient quality of histological specimens, without silver impregnation and electron microscopy, such changes were sometimes overestimated and Gn overdiagnosed. As mentioned above, RBs were collected from patients with the “inactive nephritic” or latent clinical types of Gn i.e., minimal proteinuria and/or hematuria (Chebotareva et al. 2014; Ratner et al. 1987a, 1997; Shilov et al. 2002; Varshavskii et al. 1992). As a result of the histological overdiagnosis of Gn, some patients were treated by corticosteroids and/or cytotoxic drugs such as azathioprin, cyclophosphamide or chlorambucil (Krasnova et al. 1991; Poliantseva et al. 1990; Ratner et al. 1979, 1980, 1987b, 1996, Serov et al. 1992; Tareeva et al. 1989) without sufficient indications.

### **Congenital conditions**

The dubious concept of hypoplastic renal dysplasia was developed on the basis of paediatric RBs. It was described as follows: “Racemosely arranged glomeruli with single capillary

loops, abundant rounded cells freely lying in the cavity of a capsule; single mesangial cells; irregular enlargement, loosening, and thinning of the basement membrane”, narrow extracapillary space, glomeruli having irregular form and singular capillary loops or total absence of capillaries (Severgina and Paltsev 1989; Varshavskii et al. 1999), which has no analogues in the international literature, whereas the terms “renal hypoplasia” and “dysplasia” are used with different meanings. In the author’s opinion, the descriptions were at least in part based on tangential sections of glomeruli, which is evident looking at the illustrations in (Severgina and Paltsev 1989; Varshavskii et al. 1999) partly reproduced and commented by Jargin (2014) (Fig. 1-1). It was recommended to the authors to verify their concept counting glomeruli “with singular capillary loops” in autopsy or nephrectomy specimens, but it has not been done. Interestingly, one and the same ultrastructural image was published with a similar caption by different authors in the same journal 25 years apart (Severgina E.S. and Paltsev 1989; Severgina L.O. and Gurevich 2014) (Fig. 1-1). The common feature of these and some other works is the presentation of ultrastructural findings without comparison with the light-microscopic picture, whereas variants of the norm and artefacts have been interpreted as specific pathological phenomena. For example, hypoplastic dysplasia was diagnosed by electron microscopy in 8 from 34 randomly selected patients aged 9-54 years with nephrotic syndrome and histologically minimal glomerular changes (Severgina 1991). At the same time, there was no one case of Alport syndrome or thin basement membrane nephropathy (having some morphological features in common with the “hypoplastic dysplasia” as per (Severgina and Paltsev 1989; Varshavskii et al. 1999) among 4440 RBs overviewed by Dzhanaliev et al. (2002). These two conditions constituted  $\geq 1\%$  of all renal diseases diagnosed by RB in Rostock (Nizze et al. 2003). The concept of hypoplastic dysplasia, discussed with clinicians performing biopsies, could have interfered with the diagnosis of thin basement membrane nephropathy and Alport syndrome. The morphological diagnosis of both conditions is of importance for a genetic consultation of patients.



**Fig. 1-1.** The same image published 25 years apart by different authors (Severgina ES and Paltsev 1989; Severgina LO and Gurevich 2014). Translation of the caption (left): glomerulus with singular capillary loops and freely lying podocytes X 1100. Comment: this is probably a tangential section of a normal renal glomerulus.



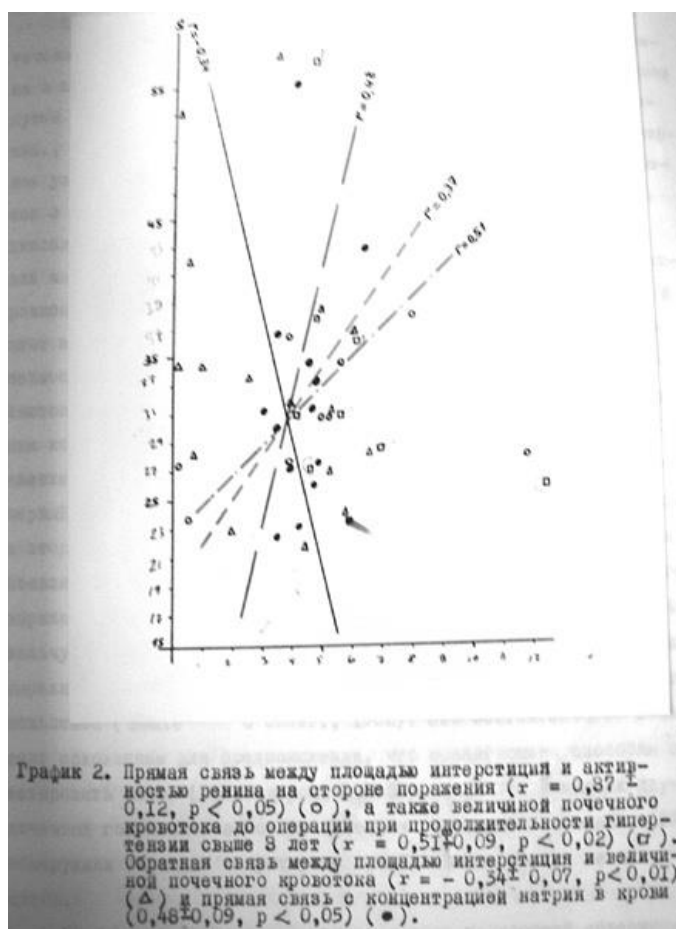
Today, the same researchers (or their followers) apply the term hypoplastic dysplasia to the glomerular changes in congenital hydronephrosis and other renal abnormalities in children, interpreting them as an inborn nephropathy affecting a major part of glomeruli (Cheskis et al. 2002; Leonova et al. 2007; Severgina 2014; Severgina et al. 2011, 2014). A regular combination of two *prima facie* unrelated conditions: an inborn glomerulopathy affecting a major part of glomeruli, and hydronephrosis related to an abnormality of the ureteropelvic junction, seems to be improbable. Glomerular changes in hydronephrosis caused by the urine retention (collapse of the glomerular tuft with the widening of the urinary space) are different from those described according to the concept of hypoplastic dysplasia (Severgina et al. 2014). For this research, 167 intra-operative RBs from children with urogenital malformations, plus RBs for the control group from adult urological patients, were collected by Severgina (2014) with questionable indications and enhanced risk at least in a part of the cases.

### **Renal and pancreatic biopsies in diabetes mellitus**

The same group of researchers collected pancreatic excision biopsies 5×5 mm in the course of the surgical operations “pancreatic blood shunting into the systemic blood flow in insulin-dependent diabetics” (discussed in Chapter 1). From the same patients, core RBs were taken (Severgina 1995). Apart from several reports from the former SU, we have found in the literature no analogues of this surgical treatment of diabetes mellitus. In the studies of RBs from diabetics, Gn and mesangiolytic changes were designated as consecutive stages of diabetic glomerulosclerosis (Severgina et al. 1994a). Ultrastructural descriptions included frequent mesangial interposition with displacement of mesangial cells to the periphery of glomerular capillary loops and formation of double-contour basement membranes (Severgina et al. 1994a,b), which is at variance with usual descriptions. In particular, the morphological picture of Gn, if detected in a diabetic patient, is usually interpreted as a superimposed condition possibly needing a special therapy (Dizdar et al. 2004; Hironaka et al. 1991). It should be commented that in diabetes mellitus, RB is generally indicated for patients under the suspicion of a renal disease other than diabetic nephropathy (Gonzalez Suarez et al. 2013). It is important to diagnose a non-diabetic renal condition, in particular, membranoproliferative Gn (characterized by the mesangial interposition), where the immunosuppressive therapy should be considered. The interpretation of morphological picture of Gn as a characteristic phenomenon or a stage of diabetic nephropathy is potentially misleading.

### **Renovascular hypertension. Summarizing discussion**

RB in renovascular (named also vasorenal in Russia) hypertension was discussed by Jargin (2009) with documentary evidence of manipulated statistics. One graph adapted from the dissertation by Paltsev (1985) is reproduced here (Fig. 2-1). During the period 1982-1990 the author was a trainee, thereafter pathologist and lecturer at the Department of Pathological Anatomy of the Sechenov Medical Academy, attended meetings of Moscow Society of Pathology, heard many scientific reports and defenses of theses. Along with reports having value of review or compilation, there were numerous useless and largely fabricated ones. Unreliable publications originated from renowned institutions. There was also some business around it: many postgraduates came to Moscow from other cities and Soviet Republics to be awarded a scientific degree; they paid for preparation of specimens, illustrations, and sometimes also for a review of literature. They also presented pricey gifts to their scientific consultants.



**Fig. 2-1.** This graph is from the dissertation (thesis) by Paltsev (1985). Comment: Four scatter diagrams together with all points are plotted on one graph. The calculation of statistical significance after counting the points and comparison with reference tables has shown that three correlation coefficients ( $r$ ) are insignificant, the given  $P$ -values being wrong. Note that all linear correlation plots, supposed to be independent from each other, cross in one and the same point. This is extremely improbable.

What are the practical implications of this kind of research? It is difficult to evaluate the extent of damage, knowing only a tip of the iceberg. Some risk for patients was caused by renal biopsies taken for scientific purposes without sufficient indications, for example, in renovascular hypertension sometimes from both kidneys (Paltsev 1985; Paltsev and Serov 1987; Paltsev et al. 1981, 1982; Tankovich et al. 1985). Invasive procedures applied without sufficient indications also for research are discussed in other chapters of this book. As for the global science, there has been no appreciable harm: the studies discussed here have hardly ever been cited abroad. Their true scientific value has been understood by experts. The indirect harm has, however, been considerable: students and young researchers can learn from the Chancellor of Medical Academy (Paltsev 1990-2009) that scientific misconduct brings success and profit.

Some speculations should be commented: “Mathematical model of renovascular hypertension” (Paltsev et al. 1982; Tankovich et al. 1985) “Renal endocrine system” and its “stereotype cyclic changes” in various renal diseases (Paltsev et al. 1984). Corresponding English language summaries, available also in PubMed, deserve to be quoted:

“Comparison of the findings of clinical, instrumental, and laboratory examination of patients with vasorenal (i.e., renovascular) hypertension with the results of morphological analysis of renal bioptic material showed that multivariate regression analysis of the parameters of examination of the patients provides for authentic calculation of the quantitative index of nephroarteriosclerosis - the vascular index of the afferent arterioles of the renal glomeruli. The calculated values of the vascular index for both kidneys are criteria for choosing the method of operative intervention in vasorenal hypertension” (Paltsev et al. 1982).

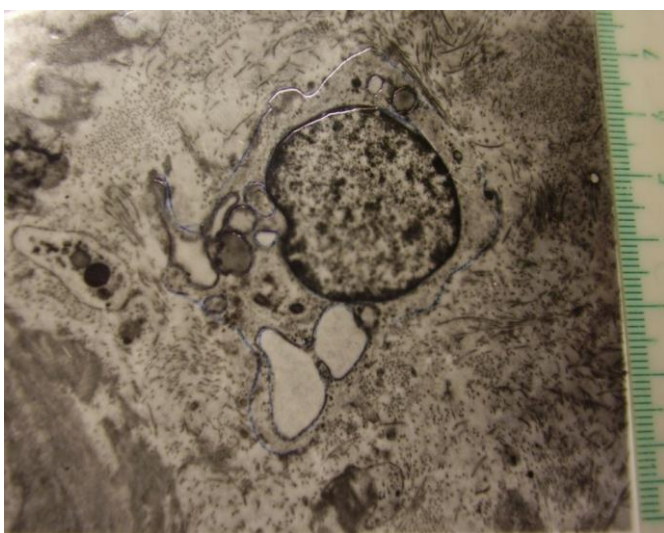
Comment: At that time I was employed at the same department and examined biopsy specimens from patients with renovascular hypertension; they were usually small (especially from the kidney contralateral to the renal artery stenosis), most of them contained no more than 1-3 glomeruli and arterioles, while many specimens contained none of these structures at all. Most of the specimens were unsuitable for a reliable morphometric assessment, let alone determining indications for the surgical treatment of renovascular hypertension. I informed thereof the chief researcher Mikhail Paltsev and other participants of the study, but they disregarded it. At that time I declined participation in a similar study, having said to Paltsev, the future Chancellor of the Sechenov Academy, that I prefer to avoid partaking in falsifications.

Another summary by Paltsev et al. (1984) reads as follows:

“The renin-angiotensin (juxtaglomerular apparatus - JGA) and prostaglandin (interstitial cells (IC) of renal medulla and nephrocytes of collecting tubules (NCT) systems of the kidneys were studied in 72 patients (renal biopsies, nephrectomy, morpho-functional correlations) with the nephrogenic arterial hypertension (vasorenal hypertension, chronic glomerulonephritis, pyelonephritis). Histologic and electron-microscopic methods were used; the renin activity was determined in the peripheral blood and blood from the renal veins. The results were analyzed mathematically and statistically using an original program. It is shown that stereotype cyclic changes develop in the endocrine renal system of patients with renal hypertension and that they reflect the stages of initial hyperfunction (ultrastructural hyperplasia of JGA cells with appearance of numerous immature granules; ultrastructural moderate hyperplasia of medulla IC; increase of blood renin activity), discoordination of functions (progressing JGA hyperfunction and depletion of prostaglandin synthetic function of medulla IC; compensatory activation of NCT; further increase of the blood renin activity) and depletion (atrophy and fibroblastic transformation of the JGA of the majority of nephrons and of medulla IC). The stages of renal endocrine system alterations in the arterial hypertension are the manifestation of compensatory and adaptive response. Morphofunctional analysis with the use of morphometry and mathematical statistics are necessary for the objective evaluation of this response.”



**Fig. 2-2.** Ultrastructural morphometry in action (year 1985). Left: Hewlett-Packard computer, right - image analyzing system.



**Fig. 2-3.** The photograph of a renal interstitial cell used for ultrastructural morphometry. The cell membrane and some organelles are outlined by a ball pen connected to an image analyzing system. The cell membrane is not clearly visible.

In the late 1980s, I searched through the archive of ultrastructural images on photographic paper and glass plates by Mikhail Paltsev and found approximately 20-30 images of juxtaglomerular cells with numerous secretory granules and rhomboid protogranules showing similar structure, probably originating from a limited number of patients and experimental animals. These photographs were used as illustrations in the thesis (Paltsev 1985), numerous articles and books. There was not enough material for a reliable morphometric and statistical assessment of the “form parameter”, relative volume of secretory granules, and other ultrastructural morphometric indices. Human renomedullary interstitial cells, bona fide suitable for assessment of prostaglandin synthesis, were absent in the Paltsev’s collection. There were only a few doubtful ultrastructural images, repeatedly used as illustrations in different publications. The phenomenon referred to in the above-cited summary as a “compensatory activation of nephrocytes of collecting tubules (NCT)” - a proposed morphologic equivalent of the enhanced synthesis of prostaglandins or other antihypertensive factors, has never been satisfactorily illustrated. The data about “stereotype cyclic changes in

the endocrine renal system” (Paltsev et al. 1984) in glomerulonephritis, pyelonephritis, and other renal diseases, and about the “calculated values of the vascular index for kidneys on both sides as criteria for choosing the method of operative intervention in vasorenal hypertension” (Paltsev et al. 1982) have never been confirmed by other researchers.

According to Paltsev (1985), renal tissues from patients with chronic pyelo- and glomerulonephritis underwent ultrastructural morphometry. Additionally, a large number of cases of renovascular hypertension (both kidneys) were analyzed. Corresponding quantities of representative sets of ultrastructural images never existed. I observed how this morphometry was performed: it was done by technical personnel using ultrastructural images on the photographic paper about 10 cm in size, by means of a ball-point pen connected to an image analyzing system (Fig. 2-1, 2). Not much care was applied to this activity, which was sometimes performed during or after the alcohol consumption. Only the granule-containing cells were analyzed morphometrically; the mean level of granularity was not determined even for a single JGA, let alone representative assessment of different JGA from the same patient. Characteristically, secretory granules were measured together with nonspecific lipofuscin-like granules, known to be a “potential source of confusion when estimating the degree of granularity” (Biava and West 1966). Moreover, the common practice was selecting suitable images independently of their origin, the single most important consideration being their fitting into the concept.

## **Conclusion**

The overdiagnosed mesangioproliferative glomerulonephritis resulted in hundreds of patients overtreated with steroids and cytostatica only in the central institution: the Sechenov Medical Academy. Some other hospitals emulated the practice. The RB material used in some studies discussed above was unique e.g., wedge or core biopsies in hydronephrosis, acute and chronic pyelonephritis. The collection of RBs for the studies was associated with risk; while the research was of low quality with unreliable results. Apart from the articles discussed here, no other studies based on RBs in hydronephrosis and acute pyelonephritis are known to us, while in chronic pyelonephritis no other studies performed abroad since the 1960s have been found. In particular, taking wedge biopsies from kidney in acute pyelonephritis is imprudent and may result in abscess formation. There is an opinion, shared by the author, that, considering potential complications, RB for research should not exist as such; it must always be performed according to clinical indications. If a patient gives informed consent to research on renal tissue obtained for diagnostic purposes, it can be done, provided that enough tissue remains for the diagnostics. Even today, the principle of informed consent is sometimes disregarded. At a reception of some governmental medical institutions a patient is given a form, where he or she must beforehand give a written consent to all diagnostic and therapeutic procedures, which are then sometimes performed in spite of the patient’s objections. In conclusion, high level of integrity, quality of specimens and of their examination must be a precondition for RB research. The problem is still with us: invasive procedures performed without sufficient clinical indications and informed consent.

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### Chapter 3. Endoscopy

This chapter is an update and continuation of reports on invasive procedures applied in the former Russia with questionable clinical indications, also for research (Jargin 2014, 2017). Special attention is given to the bronchoscopy (Bs) in bronchial asthma, used in spite of the widespread opinion that it brings not much benefit. In the international literature, no particular role of Bs in the diagnosis and treatment of asthma has been specified, asthmatics being regarded at enhanced risk for complications from this procedure. Among indications for Bs in asthma are persistent wheeze unresponsive to bronchodilators and other therapy. The common indication for Bs in asthma is a search for alternative causes of the symptoms while there are also other diagnostic tests. Lavage of bronchi can be indicated in severe asthma in certain circumstances. Recommendations are generally avoided here because this book is not a manual. The newest Russian-language textbooks are largely based on the international literature. However, earlier textbooks contained recommendations partly at variance with internationally accepted ones. In asthmatics, the purpose of Bs was claimed to be search for signs of dependence of the pathological process on infection and characterization of inflammatory lesions (Isaeva 1994; Klimanskaia 1972). Abundant secretion or mucopurulent sputum in a child was presented as an indication for Bs “for evaluation of the endobronchial inflammation” (Klimanskaia 1999). It was stated in the instructive monograph by Klimanskaia (1972) that in children Bs is recommended “almost in all subacute and chronic respiratory diseases”. Asthma, tuberculosis (Tb), bronchitis, and protracted pulmonary or bronchial conditions, were presented as blanket indications for Bs (Chernekhovskaia et al. 2008; Khriachkov et al. 2014; Lukomskii and Klimanskaia 1976; Shpak 1985; Vinogradova and Gracheva 1986).

Extension of indications for Bs compared to the more conservative earlier recommendations is associated with the names of Lev Ioffe and Fedor Uglov (1971, 1976; Uglov et al. 1971; Aliev et al. 1971; Ioffe et al. 1984). Ioffe (1976) wrote in an instructive edition that “Bs must be performed in all pulmonary diseases.” Uglov (1976) reported on 2477 therapeutic and 5000 diagnostic Bs performed in his institution in patients aged 1.5-78 years predominantly with inflammatory diseases such as bronchitis, pneumonia and asthma, aimed at the “assessment of inflammatory changes in the bronchial tree.” The conclusion was that Bs is important for the detailed diagnosis of practically all pulmonary diseases and can be recommended also at an early stage. “After a prolonged course of therapeutic Bs” Uglov applied resections of pulmonary segments or lobes regarded to be irreversibly changed (bronchitis deformans, bronchiectasis etc.) as a treatment method of asthma (Uglov 1976). Many thousands Bs performed in children and adults with non-specific respiratory diseases were reported also from peripheral institutions and outpatient facilities (Uglov 1971). In the same book, difficulties with the local anaesthesia were pointed out, which necessitated general anaesthesia in 20-25% of the patients. Considerable discomfort is behind these figures. Apparently, the widespread implementation of endoscopy occurred according to a directive. Interference of authorities with research and practice has been a well-known phenomenon in Russia. Health care authorities sometimes favoured less individualized approaches applicable to large categories of patients. In consequence of the authoritative management style, some methods, outdated or generally unsupported by the international literature, were used for long periods of time.

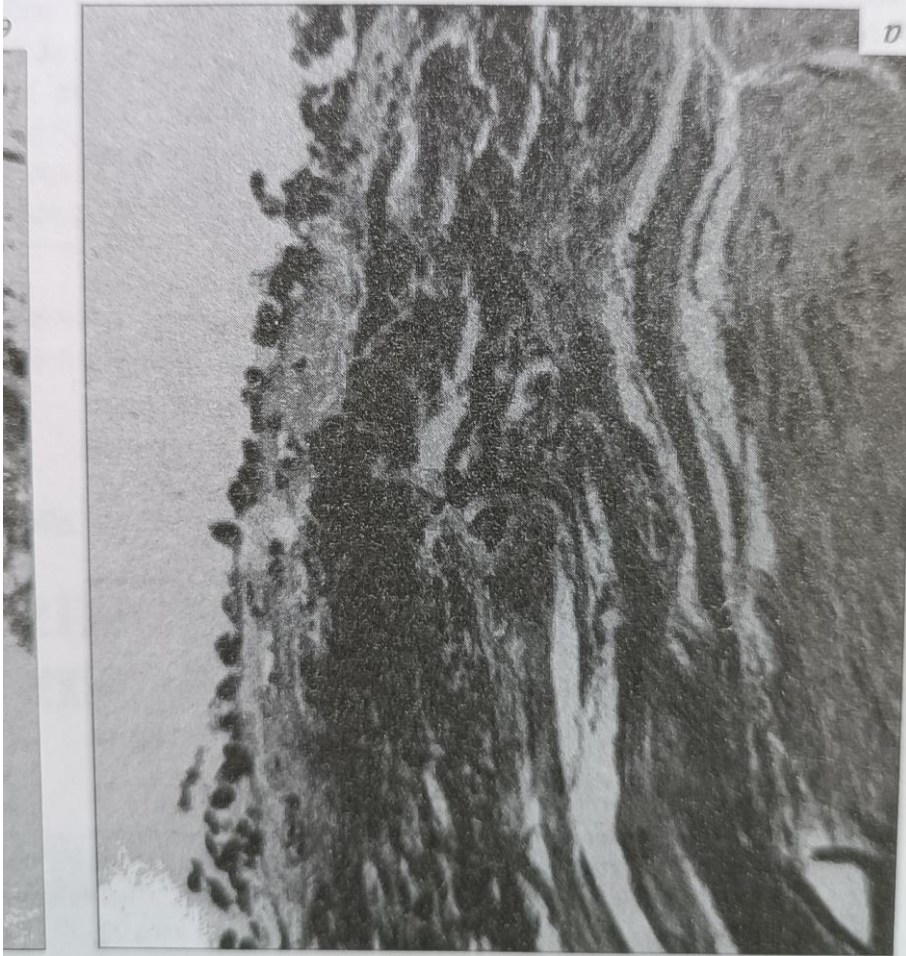
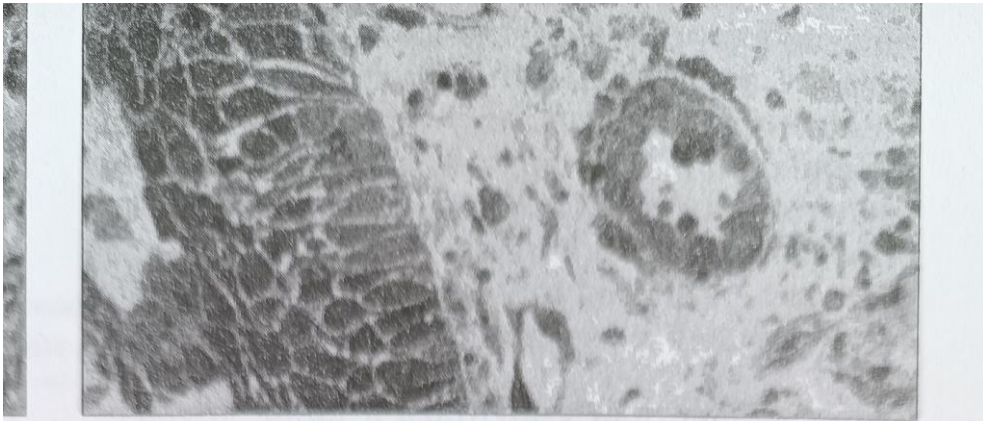
Bs was applied and recommended in children and adults with bronchial asthma both during remissions and exacerbations, in mild and severe cases (Fedoseev and Khlopotova 1988; Gerasin et al. 1971; Karimov et al. 1972; Kliachkin and Skopina 1982; Krivosheeva et al. 1988; Ovcharenko et al. 1992; Pugachev et al. 1983; Skopina 1980; Sobchenko 1977), as well

as in the “pre-asthma” i.e. bronchitis with “elements” of bronchospasm and allergy (Fedoseev and Khlopotova 1988; Sobchenko 1977). Bs was discussed as a method of early diagnosis of all forms of bronchial asthma; it was used repeatedly “for a dynamic observation” (Skopina 1980). Some experts applied up to 15 bronchoscopies (1-2 weekly) in paediatric asthma (Chistiakov et al. 1970). At the same time, Bs in asthma was noticed to be associated with the enhanced complication rate. Nonetheless, the same experts performed 388 Bs in 216 asthmatics resulting in no changes of diagnoses (Mavritsin and Lifshits 1980).

Efficiency of therapeutic Bs in moderate bronchitis was pointed out by Uglov et al. (1971), who applied 5-6 bronchoscopies per treatment course. In particular, the “atrophic type” of chronic bronchitis was regarded as an indication for Bs (Chernekhovskaia et al. 2008). Laser therapy was applied in children and adults via bronchoscope in asthma, bronchitis and chronic pneumonia (Chernekhovskaia 2011; Klimanskaia et al. 1989; Nepomniashchikh et al. 1989, 1990; Shesterina and Maliev 1993), also in the presence of pronounced atrophy of bronchial mucosa (Chernekhovskaia 2011), in atrophic bronchitis (Sidorova et al. 1994; Nepomniashchikh et al. 1994) or “primary atrophic bronchopathy” including that supposedly caused by ionizing radiation, while histological specimens were thick and difficult to evaluate (Fig. 3-1) (Nepomniashchikh et al. 2000). Of note, similarly to other forms of electromagnetic radiation, laser at lower power densities causes warming and at higher densities - damage of tissues. From the viewpoint of general pathology, atrophy may advance due to additional damage. Not only flexible but also rigid bronchoscopes have been used e.g. in chronic bronchitis or asthma also in children (Bogatyrev 2001; Shakhanov and Ivanov 1990). For acute pneumonia in children, Bs was recommended to determine the type of inflammation in the bronchi (catarrhal, purulent); in chronic pneumonia Bs was held necessary for the same purpose and also to rule out Tb and congenital conditions (Isaeva 1994). In paediatric chronic pneumonia, Bs was recommended by the Ministry of Health (1976) for the diagnosis and therapy as “one of the main methods.”







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**Fig. 3-1.** Biopsies from a large bronchus. Thick histological sections. From the caption: pronounced atrophy of bronchial epithelium (van Gieson stain X 160); above right - squamous transformation of bronchial epithelium (semi-thin section, Azure II stain, X 1000). Below – atrophy and sclerosis (Nepomnyashchikh et al. 2000).

Furthermore, broncho- and gastroduodenoscopy were used as a second screening phase in “chronic non-specific pulmonary diseases” (including asthma and chronic bronchitis) reportedly found in 4.08% of children residing in industrially contaminated areas of Moscow and the suburbs (Klimanskaia and Vozzhaeva 2001). Bs was used as a screening method in agricultural workers contacting with dust: both in healthy ones and in those with allergic rhinitis or chronic bronchitis (Davidian 1991); in bronchitis patients professionally contacting with proteolytic enzymes (Kuchik et al. 1988); generally in bronchitis, acute and chronic pneumonia including children (Chernushenko et al. 1984; Fedchenko et al. 2002; Lishke and Novikov 1990; Rannev 2003; Shpak et al. 1984); in young patients supposed to have community-acquired pneumonia (1478 bronchoscopies in 977 patients) (Kazantsev 2004).

The overtuse of surgery in tuberculosis (Tb) is discussed in Chapter 1. Bs was applied in all forms of Tb in many institutions and research cohorts (Belenkii and Balon 1977; Bubochkin et al. 1989; Chernushenko et al. 1986; Kvasnitskii and Voloshchuk 1984; Lebedev et al. 1989; Spitsyna et al. 1984) also when Tb was suspected (Nikolaev et al. 1982; Nikolaev et al. 1982); it was recommended for young patients with “hyperergic” (high degree of hypersensitivity) tuberculin tests (Chelidze et al. 1982) or within the diagnostic algorithm for cases of suspected Tb with the sputum negative for Mycobacteria (Palamarchuk et al. 2015). Primary Tb was regarded as an indication for Bs in children (Isaeva 1994), although it is reportedly no more sensitive for the culture of Mycobacteria than gastric aspiration (Feinsilver and Fein 1995; McIntosh et al. 2004). In destructive Tb, therapeutic Bs (1-2 weekly during 2-4 months) was recommended by the Ministry of Health (1982), while the principle of informed consent was insufficiently known and observed. Bs was used as a screening method for Tb in patients with general malaise, having both positive and negative tuberculin tests (Belenki 1962). Other researchers used Bs as a second step screening method for Tb in children (Aksenova et al. 2005). Endoscopic monitoring of the therapy results has been applied in pulmonary Tb with non-specific bronchial lesions (Berzner et al. 1988; Filippov and Chernichenko 2014).

### **Research quality and informed consent**

As mentioned above, bronchial biopsy specimens have been used for research, whereas some histological specimens were poor quality (Fig. 3-1), descriptions being stereotype, morphometric and other quantitative indices changing uniformly (Nepomnyashchikh et al. 2000; Smakov et al. 1995) e.g. inflammatory indices (serum immunoglobulins, T- and B-lymphocytes, markers of phagocytosis) were influenced in the same direction both by medical and surgical asthma treatment (Savchenko 1982); details about asthma surgery are in Chapter 1. Trimming of data was proven in some cases; more details and references are in the book by Jargin (2000) and in Chapter 10. Some histological descriptions were doubtful e.g. “atrophic processes” in bronchi of asthmatic children increasing with time: atrophy or “subatrophy” reportedly found in 79.5% of asthmatic children older than 12 years (Bogatyrev 2001). Biopsies were taken for research from large bronchi of patients with known lung cancer, whereas quality of histological and ultrastructural images was low (Nepomniashchikh et al. 2000), which implies additional discomfort for cancer patients with no consequences for the therapy. Another example: lavage fluid collected by Bs from patients with lung cancer and from those with Tb (including focal forms, tuberculoma etc.) was examined by infrared spectroscopy with no known repercussions for theory and practice (Gelfond 1996).

In the paediatric clinic of the Sechenov Medical Academy (a leading institution where textbooks have been written (Isaeva 1994), endoscopic methods have been broadly used for the diagnostic, therapeutic and scientific purposes since the 1960s. Bs was used in children with pneumonia, bronchitis and asthma (Klimanskaia et al. 1974; Novikova et al. 1996), while complications were noticed (Dombrovskaia et al. 1967). Besides, gastrodoudenoscopy with biopsy used for research was applied in children with rheumatoid arthritis, dermatomyositis, scleroderma, systemic lupus erythematosus, respiratory and hepatobiliary diseases (Chumakov et al. 1986; Klimanskaia and Vozzhaeva 2001; Klimanskaia et al. 1986; Musaev et al. 1991a,b; Shakhbazian et al. 1991; Tsoi et al. 2004). Gastroscopy was used for the screening of children born to mothers with bronchial asthma (Geppe et al. 2004). Aliev et al. (1987) applied gastrodoudenoscopy in patients with end stage kidney disease. A series of studies with the overuse of cystoscopy with biopsy in connection with the overdiagnosis of malignant and premalignant urinary bladder lesions (Romanenko et al. 2009) are commented in Chapter 4.

As mentioned in other chapters, the principle of informed consent was not sufficiently known and observed, being mentioned only in some recent Bs studies. Paternalistic and authoritative attitude to patients often prevailed. There has been a stereotype: post-graduate students and doctoral candidates came to Moscow and other centres from different parts of the former Soviet Union, some of them paying for literature reviews, preparation of specimens, etc. Some researchers planning emigration completed their dissertations under time pressure. Among others, invasive methods were applied without sufficient clinical indications sometimes in conditions of suboptimal procedural quality assurance; overviewed in other chapters. Admittedly, as far as it can be perceived from the literature, endoscopy is less frequently used for research today. In the study by Fedorov et al. (2005), Bs was performed in children 5-15 years old with moderate to severe asthma, while informed consent was obtained from the children's parents. Some bronchoscopic methods applied for diagnostics and therapy have been patented; several examples follow. Therapy monitoring of chronic catarrhal bronchitis by means of repeated examinations of bronchial washings obtained by Bs every other day during the whole period of treatment (Zboromirskii et al. 1997); laser therapy via bronchoscope of "atrophic bronchitis deformans" (Chernekhovskaia et al. 1994; Chernekhovskaia and Povaliaev 1995; Shiriaeva 2007); bronchitis diagnostics in children and adults (Bogadelnikov et al. 1995; Novikov and Verkholtantsev 1997; Gruzintseva and Novikov 1990), treatment of pulmonary Tb by endobronchial instillations of surfactant preparations produced from bovine lung or human amniotic fluid every other day during 3-8 weeks (Erokhin et al. 2002); discussed in by Jargin (2013).

## **Conclusion**

The purpose of this chapter was to overview some endoscopic methods, applied with questionable indications, and to remind that the risk-to-benefit ratio should be kept as low as possible. Invasive procedures including endoscopy and biopsy used for research without sufficient clinical indications fall under the jurisdiction of the Declaration of Helsinki. In any case, such research presupposes integrity and informed consent. When a child is able to give assent to decisions about participation in the research, the investigator must obtain it in addition to the consent by parents or legally authorized representatives (Neill 2005). Adolescents are in a sense between children, who are to be treated according to their best interests represented by parents or caregivers, and independent adults, who are to be treated according to their wishes (Dickens and Cook 2005). Consent of human subjects for participation in research requires that they fully understand their role and risks, and can withdraw any time without being disadvantaged. Children require additional protection. In the



author's opinion, endoscopy for research, Bs in particular, should not exist as such; it must always be implemented according to clinical indications. Research can be performed on biopsy specimens collected for diagnostic purposes (discussed in Chapter 2). However, enough tissue must remain for the diagnostics. Archived tissue in paraffin blocks may become necessary for future diagnostic examinations. In any case, the research involving humans should yield valuable results, not procurable by other methods. Furthermore, medical research involving human subjects must be conducted only by experts with adequate training. Finally, significance of the procedural quality assurance in endoscopy should be stressed. The procedures should not be performed under the time pressure. The training methods not involving patients e.g. using anatomic models and video technologies must be applied as much as possible. Objective selection of capable trainees, prepared to dedicate most of their time for their profession, is of great importance. Lack of experience and skills reduces diagnostic and therapeutic yield of endoscopy while increasing risks. In conclusion, practical recommendations must be based on reliable and reproducible research. Only such research should be included into reviews and meta-analyses.

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## Chapter 4. Radiation-related lesions

It is known that the incidence of thyroid carcinoma (TC) among people exposed to ionizing radiation at a young age from the Chernobyl accident (hereafter accident) increased considerably. The precipitous elevation of TC detection rate, started ~4 years after the accident, could be predicted neither from studies of atomic bomb survivors in Japan nor from experiences with radiotherapy. As discussed previously (Jargin 2023), some dose-effect relationships have been caused or influenced by bias and confounding factors, especially the dose-dependent selection: individuals knowing their higher doses or residing on more contaminated territories would be on average more motivated to undergo medical examinations, being given more attention by medics. TC was comparatively rarely detected among young people in the former SU prior to the accident: in Belarus (1981-1985) in people younger than 15 years the incidence rate was ~0.3 and Ukraine 0.5 cases per million per year. In the northern provinces of Ukraine the incidence rate of TC was as low as 0.1 per million per year (Stsjazhko et al. 1995). According to another source, the incidence of TC among patients younger than 14 years increased from 0.3 (1981-1985) to 30.6 (1991-1994) cases in Belarus, and in the whole Ukraine from 0.4 to 4 per million per year (Romanchishen 2010).

The above-cited pre-accident figures are very low compared to other industrialized countries. A table with incidence rates for different countries is presented in the article (Demidchik et al. 2007). In a later publication an overview of worldwide statistics is given, whereas it is stated: “The incidence of TC in children below 14 years of age is 0.5-1.2/million and 4.4-11/million for adolescents between 15 and 19 years of age, with constantly growing number of cases in both Europe and America” (Drozd et al. 2021). A comparison of these figures with those quoted above indicates that there were neglected TCs in the population prior to the accident. The fact that a screening can elevate the TC detection rate many times has been known long since. Moreover, some people strived for recognition as victims of the accident to get better therapy for their diseases. TC cases from non-contaminated territories wrongly registered as Chernobyl victims must have been on average more advanced as there had been no mass screening outside the Chernobyl area. Accordingly, TCs found during the first decade after the accident were on average more advanced than those detected later.

Apparently, the considerations delineated above have been camouflaged. The time span 1986-1990 (when the screening already began and the TC frequency started to grow) was chosen by the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR 2008) for comparison with post-accident figures because “1986 and not earlier, data on TC incidence have been specifically collected by local oncologists” (UNSCEAR Secretary, e-mail message of October 22, 2013). Fridman et al. (2014) claimed that the TC incidence in Belarus in the period from 1971 to 1985 did not significantly differ from that in other countries, referring to the paper by Williams (2008), where no such information was found. Balonov (2013) stated without references that the pre-accident TC incidence in children younger than 10 years in Belarus and Ukraine was 2-4 cases/million/yea i.e. much higher than the statistics quoted above (Stsjazhko et al. 1995; Romanchishen 2010). Apparently, the mass screening after the Chernobyl disaster found advanced neglected malignancies that were misinterpreted as aggressive cancers developing due to the radiation exposure after a short latency. This gave rise to the doctrine that radiogenic TCs tend to be rapidly growing and early metastasizing (Yablokov 2009; Fridman et al. 2015), which has contributed to excessive radicalism of the treatment.

Here follow several quotes concerning Chernobyl-related TC (from Russian): “Practically all thyroid nodules, independently of their size, were regarded at that time in children as

potentially malignant tumours, requiring an urgent surgery” (Lushnikov et al. 2006). The recommended treatment was: “Radical thyroid surgery including total thyroidectomy (TT) combined with neck dissection followed by radioiodine ablation” (Demidchik et al. 2007) and irradiation with 40 Gy (Mamchich and Pogorelov 1992). Certain experts generally advised TT with neck dissection for TC (Demidchik and Kontratovich 2003). Less radical surgery was deemed “only acceptable in exceptional cases of very small solitary intrathyroidal carcinomas without evidence of neck lymph node involvement on surgical revision” (Demidchik et al. 2006).

In a later study, 69% of post-Chernobyl paediatric TC patients underwent TT; among them, radioiodine was administered to 69% of the cases (Drozd et al. 2021). As per the same article, in patients diagnosed with TC after the Fukushima Daiichi accident, hemithyroidectomy was applied in 92% and TT in 8% of cases. In another study, “given the presence of radiation exposure in the patients’ histories”, TT was performed in 405 out of 465 papillary thyroid microcarcinomas (87.1%) with postoperative radioiodine therapy in 76.1%. The neck dissection was performed in ~50% of the cases. Of note, recurrences were recorded only in 1.3% of the cases (median follow-up 5.2 years). The authors acknowledged that microcarcinomas in their series were “rather indolent” and advised “more frequent organ-preserving surgeries vs. TT even for potentially radiogenic papillary thyroid microcarcinomas” (Bogdanova et al. 2022). The long-term overall survival of post-Chernobyl TC patients was deemed excellent: during the 1990-2014 period, 21 (1.9%) paediatric TC patients died, among them only 2 from progressive carcinoma, 3 from other tumours, 3 from non-oncologic diseases, 6 due to trauma; 7 TC patients committed suicide (Drozd et al. 2021). These figures are indicative of the overdiagnosis of TC and overuse of TT. The relatively high suicide rate could have been contributed by adverse effects of TT including cosmetic ones: many TC patients were young females.

Epidemiologists warned against false-positive diagnoses of malignancy in thyroid nodules. Many experts argued that the worldwide increase in the TC incidence (not only in children) has been caused by the screening, improvements of medical surveillance and technological advancements in diagnostics (Ahn et al. 2016). The author agrees with the following statement: “The extent to which opportunistic thyroid cancer screening is converting thousands of asymptomatic persons to cancer patients without any known benefit to them needs to be examined carefully” (Ahn et al. 2016). Health-related and social (stigmatization as a cancer patient) adverse effects of surgical hyper-radicalism are known. Apparently, the risk of complications associated with thyroid surgery (nerve injuries, hypoparathyroidism and others) is proportional to the extent of thyroidectomy (Ramirez et al. 2007). The rate of adverse effects was additionally elevated because of insufficient qualification of some surgeons engaged after the Chernobyl accident in conditions of a high workload (Romanchishen et al. 2010). The extent of surgery for well-differentiated papillary TC is a matter of debate, which is beyond the scope of this chapter. In particular, performing subtotal thyroidectomy instead of TT may be a better choice in order to preserve parathyroid function (Fortuny et al. 2015). Elective neck dissection is usually performed in patients with clinically evident nodal disease although there is no general agreement on this matter (Ramirez et al. 2007; Fortuny et al. 2015). *Ceteris paribus*, TT should be avoided if thyroxine supplies are unreliable (Pauleau et al. 2015), e.g. in conflict-stricken regions.

The sources (Arici et al. 2002; Danese et al. 1997; Giuffrida et al. 2002) were misquoted to support the recommendation: “The most prevailing opinion calls for total thyroidectomy regardless of tumour size and histopathology” (Demidchik et al. 2006). In the cited sources the subtotal resection is discussed. Analogously, the sources (Danese et al. 1997; La Quaglia



et al. 1988; Segal et al. 1997) were misquoted in the paper by Demidchik and Konratovich (2003). Along the same lines, the radical thyroidectomy was applied in TC patients exposed to radiation in the Urals (Romanchishen 2009). The author agrees with the following conclusions: “After the Chernobyl and Fukushima nuclear accidents, thyroid cancer screening was implemented mainly for children, leading to case over-diagnosis;” “The existence of a natural reservoir of latent thyroid carcinomas, together with advancements in diagnostic practices leading to case overdiagnosis, explain, at least partially, the rise in TC incidence in many countries;” “Total thyroidectomy, as performed after the Chernobyl accident, implies that patients must live the rest of their lives with thyroid hormone supplementation. Additional treatment using radioactive iodine-131 therapy in some cases may result in potentially short- or long-term adverse effects” (Cléro et al. 2021). Histological images from Russian textbooks, potentially conducive to false-positivity, were partly reproduced and discussed previously (Jargin 2016, 2020, 2023).

Analogous overtreatment tendencies have been noticed in regard to renal and bladder lesions. Surgeons might overuse nephrectomy if they read that renal-cell carcinoma from contaminated territories is on average more aggressive, while surrounding parenchyma contains “proliferative atypical nephropathy with tubular epithelial nuclear atypia and carcinoma in situ” (Romanenko et al. 2001a). The same experts found in patients with benign prostatic disease and/or cystitis from contaminated territories severe dysplasia or carcinoma in situ in urinary bladders of 56-73 % randomly selected cases (Romanenko et al. 2000, 2001b, 2002, 2006, 2009, 2012). These percentages are evidently unrealistic, indicative of overdiagnosis and overtreatment. Some histological images were reprinted and commented previously by Jargin (2018); neither malignancy nor severe dysplasia is clearly recognizable. The clinical and morphological findings designated as “Chernobyl cystitis” or “irradiation cystitis” with “reactive epithelial proliferation associated with hemorrhage, fibrin deposits, fibrinoid vascular changes, and multinuclear stromal cells” (Romanenko et al. 2001b) were apparently contributed by repeated cystoscopy, “mapping” punch biopsies and electrocoagulation of vesical mucosa. The “marked activation of angiogenesis,” described in supposedly radiation-related cystitis (Romanenko et al. 2009), could have resulted from iatrogenic injury. The microphotographs from the papers (Romanenko et al. 1982, 1985) reproduced by Jargin (2018) indicate that overdiagnosis and overtreatment occurred also back in the 1980s.

It is important in our time of international tensions that scientists preserve objectivity. Potential conflicts of interests should be discussed. Certain scientific writers act in accordance with the interests of companies and governments selling petroleum and natural gas. Most evident is this tendency in regard to ionizing radiation, whereas the overestimation of medical and environmental side effects of nuclear energy contributes to its strangulation, supporting appeals to dismantle nuclear power plants and boosting fossil fuel prices. For example, certain statements by Yuri Nikiforov (2010), attributing the TC incidence increase “in the U.S. and many other countries” to radioiodine as a result of nuclear explosions or accidents and postulating that Chernobyl fallout “resulted in the development of thyroid cancer in more than 4000 individuals” are indicative of an ideological bias. It should be commented the incidence of paediatric TC has been increasing in more developed countries due to improvements of diagnostics. Nikiforov’s statements seem to be a continuation of the Soviet-time effort aimed at exaggeration of radiation-related risks connected among others with the name of Nikolai Dubinin (1907-1998). The concept he advocated can be characterized by the following citations (from Russian): “Any minimal radiation dose causes damage to heredity”; “there are no genetically inefficient low doses of radiation” (Dubinin et al. 1960). After the Chernobyl

accident, Dubinin (1990) wrote that “contamination of the territory with long-lived radionuclides after the Chernobyl accident was comparable to that from 200 to 300 Hiroshima bombs,” creating a biased impression about consequences of the nuclear accident. This concept does not take into account that DNA damage and repair are normally in dynamic equilibrium. There must be an optimal level of background radiation, similarly to other factors normally present in the environment, where deviation in either direction from the optimum is harmful. Living organisms would be best adapted to those radiation levels that occur naturally. Natural selection is a slow process; adaptation to a changing environmental factor must lag behind its current value. Natural background radiation has probably been decreasing during the time of life existence on the Earth. Further discussion and references are in the book by Jargin (2023).

It is known that Chernobyl accident was used to strangle worldwide development of nuclear energy (Jaworowski 2010). The use of atomic energy for electricity production is on the agenda today due to increasing energy needs of the growing humankind. Health risks and environmental damage are maximal for coal and oil, lower for natural gas and much lower for nuclear energy - the cleanest, safest and practically inexhaustible energy resource (Jaworowski 2010). The weightiest argument against nuclear power plants is that they are potential targets in armed conflicts. Escalation of military conflicts contributes to the boosting of fossil fuel prices. This is probably one of the motives to unleash the Ukraine war (discussed in Chapter 15), of militaristic rhetoric and threats to use nuclear weapons. Speculations about extraordinary aggressiveness of radiogenic cancers have contributed to the overtreatment.

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## Chapter 5. Dentistry

This chapter analyzes development of dentistry in Russia since the 1970s with special reference to dental caries. In this connection, minimally invasive dentistry (MID) is discussed. The concept of MID applied for the caries treatment includes modified methods of tooth preparation based, as far as possible, on individual evaluation of the caries progression rate. This concept is applicable also to periodontal conditions. The necessity and possibility to spare dental tissues have been undervalued. The motto of Soviet healthcare was the priority of prophylaxis, realized by medical checkups (so-called dispensarizations) at schools, factories and institutions (Avraamova and Leont'ev 1998; Jargin 2021). The approach to dispensarizations was rather formalistic. Among drawbacks were paternalistic attitude to patients, insufficient quality control and disregard for the principle of informed consent. Last time, it has been proposed to revitalize the program of dispensarizations. Patients at dental polyclinics, where free treatments are provided, are requested in advance to sign a form certifying their blanket consent to unnamed diagnostic and therapeutic procedures. At the same time, a tooth preparation can be started during examination without asking for consent.

### Dental caries

An early start of the restoration cycle and suboptimal quality of filling materials caused progressive enlargement of cavities: the restorations failed, the cavities were further enlarged. This led to fractures and extractions often at a young age. Initial and questionable carious lesions found at dispensarizations or occasional visits were treated by dry cutting, sometimes with dull rotary instruments, which led to excessive removal of hard tissues. At schools, dental dispensarizations were recommended to be performed twice yearly (Taicher and Trofimova 1970). The consent for the treatment at dispensarizations was often not asked especially from children and adolescents or their parents. The dental preparations were in fact compulsory: "The doctor identifies children who evade the treatment and takes measures jointly with the school administration" (Betelman 1936). If an adolescent or even medical student asked "not to drill," a trick sometimes followed: "I'll just inspect"; a switched off handpiece introduced into the mouth, then followed dry cutting. Poor-quality filling materials often did not hold long. Due to the early start and acceleration of the restoration cycle, so-called tooth death spiral (Mokeem et al. 2023), extensive dental prosthetics at an age around 30 years have been not infrequent. The checkups and treatments were performed under the time pressure. The explorer fixation in a pit or fissure (stickiness), enamel surface roughening and discoloration were regarded as diagnostic criteria of caries. Today, the probing of suspected lesions with the checking of stickiness is regarded to be obsolete, since it achieves no gain of sensitivity and can cause damage. Dark spots on fissures are regarded to be useless for prediction of dentinal caries in permanent teeth; it has not been shown to improve the diagnostic accuracy of caries. Apparently, the overdiagnosis of dental caries has been continued until today: "The prevalence of dental caries in 3-year-old children was 67%, in six-years olds 87% and in 12-year olds 92%" (Suntsov and Voloshina 2011). Even a 100% (55.73% in need of treatment) prevalence of caries was reported in a study of 1030 patients  $\geq 35$  years old (Prokhvatilov et al. 2006). Corresponding figures in the international literature are generally lower. Dental dispensarizations have been largely abandoned in the 1990s; but the large-scale privatization of dentistry created new problems (discussed below).

Superficial caries was defined as a lesion limited to the enamel without involvement of the enamel-dentin junction. Mechanical preparation and restoration was recommended for superficial occlusal caries and for superficial caries in general (Borovsky et al. 1987; Iakovleva et al. 1992; Kolesov 1991); this recommendation was sometimes stressed as

obligatory (Lukinykh 1998). Individual anatomic features of pits and fissures as a possible cause of the explorer stickiness were not discussed in handbooks and monographs. Erosion as an entity to be distinguished from caries was briefly mentioned without specifying therapeutic consequences. Admittedly, erosion and its therapy has appeared in recent editions along with a general adjustment of the Russian literature to international prototypes. In some manuals, mechanical preparation was recommended also for areas of enamel discoloration with an intact surface: “Mechanical preparation of hard dental tissues and filling can be performed without waiting for the cavity formation” (Lukinykh 1998). Accordingly, many “lesions” treated by mechanical preparation were anatomic variations of the grooving, fissures and pits, pigmented fissures, erosions etc. First restorations were usually placed in childhood. Exploration with a probe was often performed with excessive force, which could be partly explained by the fact that “enamel softening” was presented in handbooks as a diagnostic criterion of early caries (Iakovleva et al. 1992). It is known that demineralized but non-cavitated enamel lesions can be remineralized. Recent studies suggested that demineralized but structurally intact dentin can be remineralized (Desai et al. 2021). Nonetheless, the habitual use of the probe has been recommended also in a recent monograph (Chigarina 2020). As for the endodontic therapy, it can be seen on radiograms that the quality of root canal treatment was often inadequate; and sometimes only traces of filling materials are visible in the roots. Not all dentists have sufficient skills to perform endodontic treatments. Procedural quality was additionally impaired by the limited availability of effective anaesthesia. Pulpitis treatment and endodontic manipulations were usually performed without local anaesthesia, after arsenic trioxide devitalization of the pulp until the mid 1990s and in places also later. Dental anxiety, real phobia in many cases, prevented from asking professional help after restoration failures and tooth fractures so that some patients waited for pulpitis or periodontitis, which finally ended with extractions.

The traditional approach to the caries treatment (extension for prevention) has not been questioned until recently. The current consensus that carious dentin does not need to be completely removed has not been uniformly accepted. According to the National manual of therapeutic stomatology (Dmitrieva and Maksimovsky 2021), “it is necessary to remove all damaged tissues.” With this approach, a removal of hard dental tissues is inevitable. The Manual of paediatric therapeutic stomatology recommends removing only demineralized tissues, mentioning the possibilities of de- and re-mineralization especially in children. On other pages of the same book, a “maximal removal of pathologically changed dental tissues” is advised (Leontiev and Kiselnikova 2021). A complete removal of non-viable, carious and pigmented dentin has been usually recommended (Chigarina 2020; Britova 2019; Daurova et al. 2017; Kunin et al. 2018; Silin et al. 2016). Insensitivity of dentin during diagnostic preparation (“drill test”) is considered as a sign of its non-viability, “which is important for determining the extent of preparation” (Kunin et al. 2018). In the international literature, a non-selective removal to dentin is not recommended as an approach to the carious tissue removal. For deep lesions, complete caries excavation is considered to be overtreatment. Recent research supports less invasive strategies, highlighting that a complete removal of soft dentin may not be always necessary or desirable. Selective removal of soft dentine in deep lesions leaving it on the cavity surface adjacent to the pulp is often indicated (Innes et al. 2016; Bjørndal et al. 2019; Field 2021).

The term MID appears increasingly often in Russian-language publications, although recommendations are sometimes vague. Some authors depict MID as a time-consuming individual approach practicable only at expensive private clinics (Silin et al. 2016). Note that MID often implies avoidance of mechanical preparation, observation and/or topical treatment,

which may be neither exceedingly expensive nor time-consuming. Some papers about MID have no references being in fact aimed at promotion of certain products or services (Rzhanov 2005; Lomiashvili et al. 2010). Caries treatment has not been commented in publications on ethics in dentistry; a fragmentary discussion was found only in one monograph (Goryachev and Sagdiev 2015). Caries risk assessment aimed at the treatment individualization has been rarely discussed, while the proposed criteria - number of cavities, restorations, missing and devitalized teeth - are questionable because the role of iatrogenic factors is difficult to assess retrospectively. Teeth after repeated restauration failures were described as having “the carious process below the level of the gingival margin” (Tarasenko 2023) if even the patient hadn’t notice any spontaneous tooth decay for decades, also after restauration failures or fractures. In other words, iatrogenic damage as a result of the accelerated restoration cycle, so-called tooth death spiral (Mokeem et al. 2023), is a priori ascribed to caries. Along with other criteria of the caries risk, individual histories should be taken into account. If a patient does not notice any tooth decay over years, despite restoration failures or tooth fractures, it can be considered as an argument in favour of less extensive preparation. Apparently, frequent gingival bleedings i.e. blood in the oral cavity tends to inhibit tooth decay due to bactericidal properties of blood, frequent mouth washing and more conscious diet. Patients should be involved in treatment decisions in a meaningful way, with due consideration given to their needs, desires and possibilities (Krebs 2005).

Thanks to the Internet, the Russian-language literature is adjusting to the international prototypes, the above-mentioned topics being elucidated more and more comprehensively. Certain foreign books have been translated but many internationally used manuals are unavailable now as before. Controversies of caries treatment in Russia give rise to questions that should be answered on the basis of scientific evidence: which dental lesions, in children and in adults, must be treated by mechanic preparation and which ones can be left for observation or non-invasive therapy. The research should not be commercially influenced. The general deceleration of tooth decay because of the widespread use of fluorides, better oral hygiene and more conscious diets are arguments in favour of less extensive preparations.

### **Gingival recession and periodontal disease**

Gingival recession (GR) is a displacement of the gingival margin apically from the cement-enamel junction. The prevalence of GR increases with age; it varies from 8% in children up to 100% after 50 years (Corranza and Rapley 2002). A patient may present with symptoms including sensitivity of exposed dentin, root caries and esthetic concerns. GR is distinguished from periodontal pocketing; both types of the gingival attachment loss can be found in the same patient (Tanner et al. 2005). Among predisposing and precipitating factors are dental plaque and calculus, destructive periodontal disease, mechanical trauma including excessive brushing, root prominence, tooth malpositions, malocclusion and other anatomical factors, margins of gingival restorations, dentures, piercing, smoking and viral infections. There have been a number of studies confirming an association between the dental plaque index and GR. There is an opinion, however, that the plaque and calculus itself has little or no impact on the gingival attachment (White 1997). It can be reasonably assumed that subgingival plaque and calculus are secondary to the attachment loss and not vice versa. No association between calculus and GR was found in adolescents (Stoner and Mazdyasna 1980). An argument about plaque as a source of germs might be plausible in case of inflammation, although diverse microflora is a norm for the oral cavity, whereas most plaque bacteria are not pathogen. The relationship between plaque/calculus and GR differs among social classes. In people with insufficient oral hygiene and access to the dental care, subgingival calculus is more extensive and correlates with the periodontal attachment loss, while in those with adequate oral hygiene



the relation of GR to periodontitis is less evident (Corranza and Rapley 2002; White 1997). The concept of oral hygiene is sometimes not well defined as it is confounded with esthetics. There are statements in the Russian literature that are not supported by scientific evidence, for example: “Hard-bristled toothbrushes do not damage the gums and exert a therapeutic effect on periodontal tissues, reducing GR due to the effect of mechanical stimulation” (Perova et al. 2005). This is generally at variance with the international literature. Along the same lines, recommendations of gum massage with fingers and laser therapy of GR appear doubtful. The damaging effect of such treatments may be masked by a placebo effect. Like other types of electromagnetic radiation, laser causes warming at lower doses and injury at higher absorbed energies. Although low-energy lasers are used for the periodontal treatment, several systematic reviews have found no proven clinical benefits, while some studies have shown controversial results and questioned effectiveness (Theodoro et al. 2021). Theoretically, a non-thermal photochemical antimicrobial effect of laser is possible; but studies with temperature measurements are needed to prevent thermal damage of atrophic tissues. The supposed promotion of tissue repair by laser may be a part of an injury-and-repair sequence potentially unfavourable for atrophic tissues. Other laser applications (photoablative, photodynamic therapy, removal of diseased pocket lining epithelium, etc.) are beyond the scope of this chapter. Furthermore, the calculus removal (scaling and root planing) is often provided. The scaling has been associated with damage to enamel and soft tissues, excessive tooth sensitivity and GR (Bastendorf et al. 2021; Worthington et al. 2013). The scaling has sometimes been performed in conditions of suboptimal quality assurance (Goryachev and Sagdiev 2015). In the author’s opinion, the mechanical calculus removal is not indicated at least for older patients with GR. From the viewpoint of general pathology, being an atrophic condition, GR can advance due to repeated injury. Besides, it has been reported that excessive tooth brushing not only contributes to GR, but also can damage enamel. Among tooth brushing factors associated with cervical lesions (notched enamel and/or dentin) are frequency and manner of brushing as well as hardness of the bristles (Heasman et al. 2015).

### **Tooth extraction**

The above considerations pertain also to exodontia with curettage of tooth sockets. In the international literature a gentle curettage is recommended; it is not always listed among recommended procedures. In Russia the curettage of the socket bottom and walls has been often performed intensely, aiming at a complete removal of granulation tissue. The following was typically recommended: after a tooth extraction, granulation tissue and remaining granuloma are removed with a spoon-shaped curette (Robustova and Biberman 1996; Afanasyev et al. 2021; Tarasenko 2023). “The manipulation should be performed especially carefully near anatomical structures (the mandibular canal, the maxillary sinus, the nasal cavity)” (Tarasenko 2023). The presumed granulation tissue might be indistinguishable from normal gingiva, while indications to its complete removal are questionable as ripening granulation tissue becomes fibrotic. In this regard, the histological examination of curettage material could be a topic of research. Especially in conditions of gingival atrophy and retraction, excessive curettage of the socket may contribute to a root denudation of neighboring teeth, leading to enhanced sensitivity and pain sometimes intensive enough to entail a next extraction. In a previously reported case, a patient with GR underwent extraction of the tooth 16. Intensive socket curettage was performed in spite of the patient’s protests. After the extraction, marked GR remained in the area of neighboring teeth, with increasing root sensitivity (Jargin 2013). Subsequently, an extraction of the tooth 17 became necessary. A complaint was written to the healthcare authority, which was replied with the argumentation that “the treatment was performed in accordance with the diagnosis and in

required volume.” It should be stressed that a method, even if extensively used, is not necessarily in accordance with modern standards of care, and that practitioners should replace outdated methods with improved ones (Zinman 2000).

In earlier Russian-language literature GR was often discussed within the scope of periodontitis i.e. together with cases characterized by marked inflammation of gingival pockets. Accordingly, GR was sometimes regarded as an inflammatory condition of predominantly infectious etiology, which is not the case for GR without inflammation. The latter was also referred to as periodontal atrophy or involution (Zuhrt and Kleber 1988). Today, GR is seen as a separate entity. As generally for age-related atrophy, the prevailing approach must be avoidance of traumatizing manipulations such as subgingival and socket curettage, minimization of soft-tissue damage, gentle handling of tissues in periodontal surgery. The treatment of GR should be seen within the framework of minimally invasive periodontal therapy and MID in general. The surgical treatment of GR is beyond the scope of this chapter.

### **Privatization of Russian dentistry: ethical challenges**

The large-scale privatization of Russian dentistry in the 1990s created new problems. Some practitioners avoid conservative treatment of advanced lesions and manipulate patients towards extractions and prosthetics. Dentists often choose treatment plans based on commercial considerations rather than clinical indications (Maksimovskaya 2020), which is acknowledged in private conversations. Catch phrases are used: “Your tooth has a hairline fracture;” “the alveolar bone has been dissolved, you will lose your tooth soon”, or alike. In case of a tooth extraction, some dentists at state polyclinics offer a choice: “Do you want a paid or free injection?” The payment is unofficial i.e. under-the-counter. Anaesthesia after the free injection is incomplete. These tactics can have the following consequences: (1) the patient would abstain from the socket curettage in the presence of indications; (2) after a painful extraction, the patient may decide in favour of paid services, especially if multiple teeth have to be extracted. Pain should not be used for manipulation towards paid services. According to the WMA Resolution, the pain treatment is a human right. Formally, the obligatory insurance in Russia covers basic dental treatments; but some personnel at polyclinics accept under-the-counter payments. In conditions of legitimacy and high ethical standards, market economy stimulates a sound competition of constructive ideas, innovations and treatment quality. In conditions of disrespect for laws, regulations and ethics, the competition turns towards discrediting the free healthcare, manipulation towards paid services, harassment of non-paying patients. In dentistry, this included examinations with a probe applying excessive force, hints about poor quality of filling materials, inadequate anaesthesia etc. Unfriendly attitude towards non-paying patients in Russian governmental medical institutions has been noticed since the economical reforms of the 1990s. Especially some aged persons perceive such attitude as insulting and don’t seek medical help even if they have symptoms or a chronic disease. Apparently, this is one of the reasons of the relatively short life expectancy in Russia. War veterans enjoy advantages in the healthcare and everyday life; however, there are misgivings that the veteran status has been awarded gratuitously to some individuals from the privileged milieu. Those participating in the current conflict in Ukraine (Chapter 15), factually or on paper, will obtain the war veteran status hence acquiring privileges over fellow-citizens.

### **Conclusion**

Entering the tooth restorative cycle should be avoided as long as reasonably possible. An economical re-routing of dental practices is needed, so that they could survive using

preventive and minimally invasive methods more extensively. Dental treatments at the polyclinics, providing free care to patients with obligatory medical insurance, must be performed on the state-of-the-art level. Improvements in ethical standards of healthcare providers and managers of all levels are needed. For this scenario to be realized, the first step that needs to be taken includes the exchange of experience through the implementation of temporary programs for Russian dentists to go abroad and authorized foreign advisers to come to Russia. The ongoing international conflicts and terrorism must be discontinued to facilitate international cooperation, otherwise the backlog in the healthcare in some parts of the world including Russia will deepen. Finally, but not of least importance, law and ethics are fundamental to the practice of dentistry. The way to improvements must be propagation of medical ethics: “Dentistry for the patient” instead of the “dentistry for the dentist” (Hochman 2006).

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## Chapter 6. Psychiatry

The abuse of psychiatry in the former Soviet Union was broadly discussed during the second half of the 20th century. In the 21st century, the interest to this theme has subsided, which does not mean that the problem has remained in the past. In addition to political pressures, the causes of abuse can include low standards of training and practice, inadequate procedural quality assurance (Lavretsky 1998), limited access to foreign professional literature and poorly implemented legislation because professionals have not been trained to use the new laws (Jenkins et al. 2005) or lack the motivation to use them.

### Case report

Previously, we reported a case study (Jargin 2009) illustrating overdiagnosis of schizophrenia in the former Soviet Union. A 16-year-old schoolboy (hereafter patient) with mild communication abnormalities was brought to psychiatrist by his mother. The patient subsequently admitted that the real goal was exemption from military service (conscription). The author observed the patient for many years, also in stressful situations, and did not notice any mental abnormalities, apart from alcohol dependence that developed later on. Aside from shyness during adolescence, the only notable complaint was the statement that his “nerves were like ropes”. This was interpreted as cenesthopathy and sluggish schizophrenia was diagnosed. The concept of cenesthopathy was coined to describe unusual bodily sensations without objective findings; it is no longer in the mainstream of contemporary psychiatry (Graux et al. 2011; Simon et al. 2014). However, Russian literature has a body of publications on cenesthopathy culminated in the recognition of cenesthopathic form of schizophrenia (Basov 1980; Jenkins and Röhrlich 2007; Smulevich 1980). Besides, cenesthopathy has been regarded as a symptom of “hypochondriacal” and sluggish schizophrenia. The overdiagnosis of the latter entity in Russia has been discussed previously (Jargin 2011). It is known that some forms of adolescence turmoil may lead clinicians to diagnose a serious condition to be confronted one day with a completely recovered patient; although severe disorders in adolescence usually do not disappear completely (Nicholi 1999). The patient was prescribed a phenothiazine drug and trihexyphenidyl (known in Russia as Cyclodol). There was no proper control of the drug intake. The patient brought Cyclodol tablets to school and offered to classmates with the comment that it was a narcotic drug. Curious teenagers took it during lessons, which remained unnoticed by teachers. One boy suffered intoxication with a delirium-like state after an intake of trihexyphenidyl together with alcohol. The patient was registered at the psycho-neurological dispensary, exempted from conscription, denied a driver’s licence and directed to a specialized educational institution, where he acquired a profession of floriculturist. After that he worked in city parks. Later on, following advice of his friends, among whom were medics, the patient switched to car repair work, completed an evening technical education, got married, and reduced his alcohol consumption. The patient suffered from stigma all his life: registration at the psycho-neurological dispensary was known by surrounding people, impaired his relationships and employment possibilities. Apparently, this contributed to his alcohol abuse.

Schizophrenia has been often overdiagnosed in the former Soviet Union, while its concept was broader than that used in the United States and other countries (Birley 2002; Bonnie 2002; Keith and Regier 1989; Lavretsky 1998). Overextended diagnostic criteria of the sluggish schizophrenia affected many people having nothing to do with politics or dissent. Personality disorders, neuroses, reversible derangements in adolescence were often misdiagnosed and treated as schizophrenia. It can be illustrated by the citations (verbatim from Russian): “A part of the patients with sluggish schizophrenia, after a juvenile crisis,

achieved a complete social and professional adaptation, continued education and got married” (Tsutsulkovskaya and Pekunova 1978) or “a majority of patients with juvenile sluggish schizophrenia become compensated” (Tiganov et al. 1999). In the Soviet literature, schizophrenia has been considered to be a lifelong process: despite remissions and periods of health, the disease is regarded to be present, the diagnosis of schizophrenia thus remaining appropriate (Holland and Shakhmatova-Pavlova 1977). Accordingly, patients remain registered with the psycho-neurological dispensaries throughout their lives, which implies stigma for them and their families. The procedure of cancellation of the registration has been rare and usually unsuccessful (Birley 2002). The registration can contribute to unemployment because some employers ask for a certificate from a psycho-neurological dispensary. Access to foreign professional literature has been limited (Jargin 2010), while in Russian textbooks differential diagnosis between personality disorders, neuroses and schizophrenia is explained vaguely, leaving space for individual judgment. For example, in the textbook by Lichko (1995), the differential diagnosis between the sluggish schizophrenia, neuroses and personality disorders is not discussed at all, while it is only stated that many months of observation can be required, thus justifying prolonged institutionalization. Psychopathologic phenomena typical for neuroses (hysterical, dissociative, obsessive-compulsive), unusual interests, eccentricity, were presented as diagnostic criteria for schizophrenia. Existence of subclinical, asymptomatic and non-manifestative forms of the disease was postulated (Smulevich 1989; Il’ina 2006; Molchanova 1978, 1981).

In some textbooks (Korkina et al. 2004; Zharikov and Tiulpin 2000), sluggish schizophrenia was presented as a synonym of a schizotypal personality disorder according to the International Classification of Diseases (ICD). Although the 10th Revision of ICD, endorsed by the 43rd World Health Assembly in 1990, was accepted, the Soviet-era classification has been further in use, while ICD was criticized (Polishchuk 2001). The term sluggish schizophrenia continues to be used, whereas the same Russian term *vyalotekushchaya* is now translated in English summaries of some articles not as sluggish but as “slow progressive”. After some debates in the 1990s (Kotsiubinsky 1992), the topic is hardly discussed anymore. It was pointed out by leading psychiatrists that the Soviet classification of mental disease is based on etiology and pathogenesis, supposed to be an advantage over foreign classifications based predominantly on syndromes (Zharikov 1999). Note that the etio-pathogenetic approach, in conditions of insufficient knowledge on etiology and pathogenesis and lack of diagnostic tools, contributes to overdiagnosis.

The sluggish variety was reportedly the most common form of the disease: up to 50% of all schizophrenia cases (Korkina et al. 2004; Polishchuk 2001). The entity was additionally expanded by so-called schizophrenic reactions, a concept that allows diagnosing reactive conditions as “psychogenic exacerbations” of the disease that had been non-manifest prior to environmental stress (Il’ina 2006). Another contribution to the overextension of the entity was the doctrine about the “Nosos and Pathos” by the leading Soviet psychiatrist Andrei Snezhnevskii (1971; Lichko 1995), where the dynamic process is defined as Nosos and hereditarily predisposing constitutional traits as the Pathos of schizophrenia. According to this doctrine, the Nosos can transform into the Pathos and vice versa. In this way, the disease is mixed up with constitution, permitting personality disorders and constitutional traits to be diagnosed as schizophrenia. Furthermore, childhood autism, which had been introduced into Russian classifications in the late 1980s but not uniformly accepted, was classified and treated as childhood schizophrenia (Krasnoperova 2004; Tiganov and Bashina 2005). With regard to the treatment, antipsychotic drugs have been recommended by Russian handbooks for all forms of schizophrenia, including the sluggish form (Korkina et al. 2004; Tiganov et al. 1999)

and “increasing shizoidization” (Lichko 1995). The over-institutionalization of patients with mental disorders has been common practice (Jenkins et al. 2005). Accordingly, the Russian Federation (RF) has one of the highest levels of psychiatric beds per capita in Europe (Jenkins et al. 2007). Conditions in psychiatric hospitals, where the patients stay for a long time, have been primitive: overcrowding, no privacy, insufficient hygiene.

Some institutions are investing in major repairs of buildings but overcrowding is persisting both in wards and restrooms. The overcrowding of toilets is increased because patients use them for smoking. Usually there are no cubicles: lavatory pans and urinals are in the same crowded room (Jargin 2015). Furthermore, shortage of nurses and auxiliary personnel remains a problem, while unprepared persons were sometimes employed without training or adequate instruction. In some cases it resulted in maltreatment of patients, supplying them with alcohol, and so forth. In spite of a formal condemnation of the Soviet-era abuse of psychiatry, a tendency of its belittling can be noticed (Polishchuk 2001). It was stated, for example, that conceptual differences between the Soviet and Western psychiatry have been minimal, while the abuse was caused mainly by political factors (Fulford et al. 1993). In fact, as discussed above, the Soviet concept of schizophrenia has been considerably broader than that used in the West. Along with the extended diagnostic criteria of the disease, a broader concept of social dangerousness has been applied (Keith and Regier 1989; Bonnie 2002), a criterion being a threat of “damage to the interests of society” (Shostakovich 1989) without further definition, which leaves space for individual judgment. The motivation to preserve the over-extended and vague diagnostic criteria is understandable: it is easier in everyday practice, because the treatment of schizophrenia is a matter of routine; it is also easier from the legal viewpoint to commit to inpatient care. Now, as before, the emphasis remains on medical aspects of treatment, without adequate consideration of social and occupational rehabilitation (Jenkins et al. 2010). Furthermore, in some publications, the question of why psychiatry but not physical medicine is open to abuse, is tackled (Fulford et al. 1993). In fact, as discussed in this book, physical medicine can be abused as well, while psychiatry is open to abuse especially in certain locations of the world, including the former SU. The first step away from it must include the broader use of English-language professional literature and the exchange of experience by means of temporary practice of Russian psychiatrists abroad and of authorized foreign colleagues in Russia. It should be noted, in conclusion, that some Soviet-era approaches to diagnostics and treatment of mental diseases were, as in medicine in general, caused by preference given by the healthcare authorities to less individualized methods applicable en masse to large contingents of patients. Today, in view of the upturn in Russian economy, individualized evidence-based methods should be applied in accordance with international practice.

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## Chapter 7. COVID-19 and vaccination

The topic of Covid-19 has been inflated and mixed with politics. Restrictions were used to encroach upon civil liberties distracting people from internal problems such as the shortages of healthcare, social welfare and security. Besides, the pandemic has been one of the tools used to suppress individual tourism in Russia. Pressures for rapid approval of vaccines are potentially conducive to the distribution of preparations having unstable quality. A winner of “the race for a vaccine against SARS-CoV-2” (Pascolo 2021) ends up with a mass vaccination by suboptimal vaccines. The preparations submitted for official approval are not necessarily always the same quality as those administered to the public. Certainly, vaccination-related risks should not be exaggerated. There are perspectives to eliminate some side effects by new vaccine technologies. The problem is a premature approval of vaccines without long-term safety data due to political ambitions and rivalry.

### Case report

A 65-year-old patient suffered an almost asymptomatic COVID-19 infection, was vaccinated a year later with Gam-COVID-Vac (Sputnik V), and thereafter developed symptoms compatible with post-COVID syndrome: asthenia, shortness of breath, cardiac arrhythmia, numbness of limbs and herpes zoster. Cognitive impairments have been noticed as well. Intense headache was the leading symptom immediately after both doses of the vaccine.

There have been reports from Russia about blood clotting-related, cardiovascular and other adverse events after vaccinations with Gam-COVID-Vac vaccine (Denisenko et al. 2021; IMA 2021, 2022; Ptushkin et al. 2023; Rachin et al. 2023). The number of unreported cases is unknown. The documentation reliability of side effects remains questionable, as it has been the case with other medical statistics (Jargin 2017, 2020). Some official information is neither transparent nor trusted by a part of the population (King and Dudina 2021). According to a survey, 12% of Russian doctors opined that vaccines produced in their country are of inferior quality (Denisova et al. 2023). There have been reports from several countries about quality defects of the Gam-COVID-Vac vaccine (IMA 2021, 2022; Baraniuk 2021; Lipp 2022). It would be interesting to perform a large-scale survey among people who first experienced COVID-19 infection and later the vaccination, asking a question, when the symptoms had been more severe. However, results of such survey may be biased because some individuals would respond in the questionnaire what they perceive as officially or unofficially advisable. Apparently, some scientific writers conform to the same principle: the rarity of reports on the side effects of COVID-19 vaccinations may be caused by local policies discouraging such reporting (Joob and Wiwanitkit 2021). Of note, reports on side effects after the use of renowned vaccines do not imply higher risks but indicate that they are better studied than those coming from less open societies tolerating scientific misconduct (Jargin 2020).

Compulsory vaccination is associated with known and unknown risks. Although SARS-CoV-2 vaccinations are generally regarded to be safe, concerns are backed by increasing numbers of reports on moderate-to-severe side effects (Finsterer 2022). Children, young adults and many other people can mount their own immunity to SARS-CoV2 undergoing acceptably low risk. There is an opinion that it is unethical to impede the access to natural immune response (Hart 2020). A recent systematic review demonstrated that natural immunity in patients recovering from COVID-19 is at least equivalent to the protection by vaccination of COVID-naïve people, with the possibility of enhanced durability of protection by natural immunity (Shenai 2021). Post-COVID syndrome cannot always be clearly differentiated from post-vaccination events. Adverse effects after vaccinations may be caused by the spike protein, adenoviral vectors, other components and contaminants in vaccines, which may depend on the

manufacturing quality. In particular, the “vaccination of COVID-recovered individuals should be subject to clinical equipoise and individual preference” (Shenai 2021).

Another problem is potential overtreatment of Covid-19. One of the motives of the over-manipulation may be personnel training, which pertains also to some other invasive methods with questionable indications discussed in this book. To prevent the overtreatment, it should be stressed that basic airway management principles apply also to known or suspected Covid-19 cases (Brown et al. 2020). The possibility of intubation must be discussed with patients on admission, so that they could make an informed decision (Zareifopoulos et al. 2020a). This is important for Russia because of the ingrained paternalistic attitude to patients. Besides, the over-manipulation and overtreatment related to Covid-19 included unnecessary testing, X-rays, polypharmacy with overuse of steroids, anticoagulants, antiretrovirals, antirheumatics and other drugs. Components of cocktail formulations may exert antagonistic effects (Saha et al. 2022). Some literature advised against non-invasive ventilation methods using questionable arguments: “Debate exists regarding the use of high-flow nasal oxygen therapies or noninvasive ventilation for concerns of aerosolization of the virus, so it is commonly not recommended (Cheung et al. 2020). Therefore, these authors and many others have come to a reasonable conclusion that it is best to intubate earlier in the disease progression. The authors also observed a high rate of pneumothorax (5.9%) after intubation” (Aziz 2020). In the above-cited article by Cheung et al. (2020) it is written: “If manual bagging is required, we suggest gentle ventilation via a supraglottic device instead of bag mask ventilation.” The main reason of such recommendations was the concern about staff safety because non-invasive ventilation is supposedly associated with the virus aerosolization (Aziz 2020; Cheung et al. 2020). Both endotracheal tube and supraglottic (laryngeal mask airway) ventilation is associated with adverse effects (Strametz et al. 2018). Prioritizing the personnel’s safety over that of patients is contradicting to the principle “Primum non nocere” (First do no harm). Critically ill patients are on average much older than the staff thus undergoing greater risks (Remuzzi and Remuzzi 2020); it would be against medical ethics to decide in favour of intubation to protect caregivers from the virus. Initial suggestions for early intubation of Covid-19 patients have probably caused harm (Zareifopoulos et al. 2020b). With regard to infectious aerosols, ventilation of rooms reduces the airborne time of respiratory droplets. This is important for hospitals where aerosolization by coughing and medical treatments is usual (Somsen et al. 2020). Besides, the stay in hospital is associated with stress, risks of nosocomial infections and iatrogenic adverse events especially for aged people.

At the same time, some health workers’ rights are violated during pandemics (Sheather et al. 2020) e.g., the principle of informed consent to invasive procedures. Compulsory Covid-19 vaccinations of medical personnel, teachers and some other employees have been criticized. Under threat of suspension from work some of them would conceal contraindications (Ponkin 2022). Admittedly, today the Ukraine war is in the foreground; and Covid-19 vaccinations are not required anymore by many institutions.

Medical personnel in Russia underwent repeated SARS-CoV-2 antibody testing using venous blood. Intravenous manipulations are associated with risks and discomfort especially for persons with narrow, collapsed veins. If the antibody test is positive, both nasal and pharyngeal swabs are taken for the PCR assay, also from known convalescents and patients with the positive viral tests in the past who thereafter have tested negatively twice i.e., after a negative seroconversion. The smears were sometimes taken with urogenital swabs using excessive force. The mucosal damage can predispose to infections. Nasal swabs are taken also from persons with atrophic rhinitis, a history of nasal bleedings, septum ulcerations etc. A complaint directed to the health care authority was replied with reference to the instructive

Letter Nr. 02-706-2020-27 of 21 January 2020 by the Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor), according to which swabs from the nasal cavity and nasopharynx are obligatory. Indeed, there are no specific contraindications for collecting specimens with nasopharyngeal swabs. However, clinicians should be cautious if a patient has had recent nasal trauma or surgery, has a markedly deviated nasal septum, a history of chronically blocked nasal passages or severe coagulopathy (Marty et al. 2020). When collection of a nasopharyngeal swab is not possible, the following are acceptable alternatives: an oropharyngeal specimen, a nasal mid-turbinate specimen (using a flocked tapered swab), an anterior nares specimen (using a flocked or spun polyester swab), a nasopharyngeal wash/aspirate or nasal aspirate specimen (La Marca et al. 2020).

In future, the increase in mortality from different causes might be ascribed to Covid-19, and subsequent mortality decrease - to “successful” anti-epidemic measures including vaccinations. In view of social consequences, many people would hide respiratory diseases, especially in those regions, where work or other outdoor activities are necessary to survive. Efficient social distancing is hardly achievable in some densely populated areas. As mentioned above, the main problem is a premature approval of vaccines without long-term safety data due to political ambitions and rivalry.

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## Chapter 8. Medical education

The attitude towards academic education has been complex since the early Soviet time. Many young people from different social classes strived for academic diplomas. The Soviet period brought about an expansion of admission numbers to universities and medical educational institutions; however, sometimes with little regard for the quality of the academic preparation of its entering students. The task was set to train new, proletarian specialists (Isakov 1980). At the same time, medical faculties were separated from universities; and medical science was separated from the mainstream scientific thought (Burger et al. 2004). Numerous new universities and medical schools were founded. The quality of teaching, especially of the fundamental disciplines, has deteriorated because of this separation. The social status and incomes of educated people including doctors' salaries had been decreasing in comparison with the rest of the population from the 1950s till the economical reforms of the 1990s, when the incomes diversified. Obviously, it was an aim and a consequence of the policy, whereas the tool was expansion of the educational offerings. This resulted in an overproduction of specialists, many of them passing examinations without much knowledge. Besides, there were privileged students such as the Party and Komsomol activists, who passed examinations without preparation. Some of them used their privileges to miss lectures whenever they wanted (Jargin 2013).

The objective of this chapter was to overview some aspects of medical education in Russia during the last 5 decades. Apart from the analysis of literature, it is based on the author's observations, who entered the Sechenov Medical Academy (named Institute at that time and recently renamed University) in 1973, later practiced at the same and other institutions in Moscow. Neglectful attitude towards academic knowledge was visible even in the most renowned institutions. For example, students were compulsorily sent during semesters to collective farms to harvest potatoes and other vegetables. In the Sechenov Medical Academy it usually occurred during the 3rd year of education, so that many topics in pathology, surgery and internal medicine were lost. The agricultural works lasted up to 2 months, in 1984 even longer. In 1978, a construction brigade (stroyotriad) came back in October (the semester started on the 1st of September). Participation in construction brigades was accepted as a substitute for the nursing practice in summer. Some academic courses were omitted e.g. clinical pharmacology in the 6th academic year 1982/83 despite figuring in the record book. All that lowered the educational level and gave rise to the phenomenon known as feldsherism. Some students characterized this phenomenon by the phrases like: "You will learn all you need at your future workplace", which corresponded to the earlier paradigm of the specialist training, before the internship had been introduced in the 1970s. The prevailing ethical standards of the students did not inhibit prompting and cribbing on examinations and tests. Attendance of lectures was stimulated by administrative measures, so that students came to the lectures to avoid trouble with the dean's office; but many of them neither listened nor wrote down anything, if even present at a lecture. For example, biochemistry was regarded by many students to be useless, while pharmacology was studied by some of them using textbooks for nursing schools; and it was largely believed that nothing else was really necessary. Admittedly, there were exceptions: in the Sechenov Medical Academy, professors' children studied predominately in separate groups; the level of knowledge among them was comparatively high. Closer to the graduation, some students became diligent in studies of their chosen fields.

After the 6-year undergraduate medical education, to become a specialist in any field of medicine, a 2-year postgraduate program (ordinatura) without a preceding internship is the usual way (Burger et al. 2004; Farmer et al. 2003). In 2016 the internship has been abolished;



so that the postgraduate training has on average become shorter. Less common is a 3-year program (aspirantura) that includes research for a candidate's thesis. Previously, certificates of medical specialists could be obtained also after a 1-year internship. Insufficient quality of training was pointed out in some publications, where it was stressed that young medical specialists should practice 2-3 years additionally in large centres under a supervision of seniors before starting to practice independently (Domanskaia et al. 2009). According to a survey published in 2010, 73.1% of the residents (ordinators) had entered the 2-year postgraduate program immediately after the basic medical education and only 15 % - after the internship (the rest - after a period of practice or an interruption) (Kabanova et al. 2010). The postgraduate students are on average not overworked; some of them come not every day and leave before noon, one of the reasons being part-time occupations discussed below. The postgraduate students on the 3-year program (aspirants) are concentrated on their scientific work, which is often performed in a formal way. Admittedly, it is possible to achieve a good level of knowledge by means of self-education, but gaps in education are hardly avoidable under the existing conditions. The rotation system is elaborated insufficiently; and many fields of theory and practice are left out.

The specialist certificates were introduced in the late 1990s. Before that, it was usual to become a medical specialist after a target internship (1 year) or a course of primary specialization of several months' duration (Morozova et al. 1994). Doctors with that kind of postgraduate training have later obtained specialist certificates. Many of them are efficient and experienced physicians although lacking a comprehensive postgraduate training. The 6th year of the basic medical education, also named subordinatura, is in fact an undergraduate specialization usually in one of three main directions (internal medicine, surgery, obstetrics/gynaecology) but possible also in other fields e.g. pathology. The curriculum of the 6th year contains several basic courses, but they are sometimes taught in a formal and superficial way; while the students' attention is concentrated on their chosen fields. The 6th year of the basic medical education (undergraduate, 1 year) plus internship (postgraduate, 1 year), was the widespread mode of the specialist training prior to the abolishment of internship in 2016.

It was acknowledged that since the 1980s there have been no educational standards that meet international requirements for the training of medical personnel (Suslonova 2014). Comparisons with the postgraduate training systems in foreign countries were seldom in the literature probably in accordance with a directive that "we must have our own ways". Some comparisons were published, earlier in Ukraine (Kazakov et al. 2003). For example, the specialist certificate in the field of anaesthesiology and intensive care is awarded after a 2-year program (ordinatura). The authors argued that a longer postgraduate training is necessary (Fedorovskii and Khalikova 2008). After a completion of the postgraduate training, continuing medical education is prescribed. Every 5 years, improvement courses up to one month long must be completed by medical specialists (Burger et al. 2004; Farmer et al. 2003; Jargin 2013). Some of such courses were rather formal and irregularly attended by many physicians. Last time, many online courses have been introduced; and their quality is improving.

All phases of medical education are complicated by the limited access to the foreign literature and generally insufficient quality of domestic editions (Murphy and Jargin 2017). Admittedly, a lot of information is available online these days. Insufficient theoretic knowledge causes, on one hand, excessive conservatism and, on the other hand, acceptance of non-evidence-based treatments (Jargin 2019). In consequence of the authoritative management style, professionals often accept working in any condition without making an effort to set things in order, keeping

the interests of patients in mind. The fact that medical researchers and practitioners must be independent in their decisions, based on the best evidence and consensus (professional autonomy), is insufficiently known (Danishevski et al. 2009).

Another topic that must be discussed in connection with the medical education is the salaries of postgraduate trainees, which are currently scarce. On the contrary, many ordinators and aspirants pay for the postgraduate education (Suslonova 2014). As a result, some of them combine the training with part-time occupations. According to a survey, 78.5% of ordinators (on the 2-year postgraduate program) and 78.8% of aspirants (on the 3-year program) combined their training with a part-time occupation, which in 1/3 of cases was non-medical. Moreover, 9.6% of the ordinators and 6.4% of the aspirants combined their education with the jobs of representatives at pharmaceutical firms (Kabanova and Lozhkevich 2010), which may create conflicts of interest interfering with optimal practice.

## **Conclusion**

Shortages of medical education, limited availability of foreign professional literature and partial isolation of Russian medicine from the rest of the world have contributed to persistence of outdated methods and approaches in everyday practice discussed in other chapters of this book. Some domestic editions are scarcely, if at all, illustrated, contain outdated information, whereas borrowings from foreign sources harbor mistranslations leading to a loss or distortion of the original meaning (Chapter 10). More cooperation with the international scientific community is obviously needed. Without profound restructuring, the system of postgraduate training in Russia can be adapted to the international standards if its components (1-, 2- and 3-year programs), would be transformed into consecutive steps. The total postgraduate training time would thus amount to 6 years, include preparation of a thesis and examinations to be awarded a degree equivalent to M.D. and a specialist certificate. Physicians not interested in research could prepare a thesis in a form of a literature review. Curricula including rotation should be modernized and adjusted to the corresponding fields of medicine. With time, the above-mentioned components of the training can be amalgamated in a unified system. In conclusion, the medical postgraduate training in Russia must be prolonged, intensified and better organized. At the same time, salaries of the trainees should be enhanced to enable them to dedicate all their time to the medical profession and to abstain from part-time occupations.

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## Chapter 9. Pathology

Pathologists at the Ostroumov Hospital (in 2016 renamed after Bakhrushin Brothers), one of the leading clinical centres and working place of the Pathologist General of Moscow, encountered problems in their practice that are representative of the whole country. The Pathologist General Oleg Zairatians performed administrative duties, participated in lecturing and research. He sanctioned the purchase of comparatively expensive equipment in exchange for personal benefits, which is not unusual for this country. In addition, several university lecturers are employed part-time. The gross examination of surgical specimens was performed without rinsing of the board for cutting-up and the instruments by flowing water, detritus being wiped off by cloth or paper (Fig. 9-1); more photographs are in the presentation by Jargin (2007). Autopsy knives used for gross dissection were often blunt. For these reasons, and also because of inadequate washing of containers, there was an increased risk of cross-contamination by “floaters”. Admittedly, there is an improvement tendency; modern equipment and instruments are acquired. For cytological specimens, only the Romanowsky-Giemsa stain was used (including cervical smears and sputum, where Papanicolaou stain would be more informative). More details are in the articles by Jargin (2010a,b).





**Fig. 9-1.** The grossing (cutting up) in a department of pathology. Not enough light, no air exhaustor, no access to water.

Histopathology and cytology are different medical specialties in Russia, cytology being a part of laboratory medicine. Comparison of cytological and histological specimens is usually not performed, cytologists do not receive regular feedback, and this mechanism of quality control does not function. However, some cytologists do compare histological and cytological reports on their own initiative. The Papanicolaou test for the screening of cervical cancers is seldom undertaken in Russia. Accordingly, cervical cancer has been diagnosed on average at a relatively advanced stage. There are almost no trained technicians for the screening of cytological specimens.

Since the Soviet time, autopsy has remained obligatory for all patients dying in hospitals. Permission from relatives to perform an autopsy is not required. If relatives wish to take the body without autopsy, they must apply in writing to the Head Physician (Chief Officer of the hospital) and explain the reason; these applications are usually granted. The brain, intestines and pelvic viscera are not examined in all cases. The autopsy helpers (so-called sanitars) are employed part-time in the funeral service. As a result, they are not always available during an autopsy. The request of a pathologist (for example, to bring formalin) can be met with the reply that the autopsy assistant has no time for it because they have to dress or shave a corpse. Relatively high incomes of the autopsy assistants and their cooperation with the hospital administration in the funeral business contribute to their low level of discipline. At the same time, cleanliness and hygiene in the rooms for the autopsy and gross dissection is often far from perfect. It has been known for autopsy assistants to hire qualified laboratory technicians and other specialists for cleaning autopsy rooms. Different kinds of ill-discipline could be observed in the department: washing and repair of private cars during working hours, visits of

unauthorized persons, noise in the rooms where pathologists perform diagnostic examinations, etc. Transcriptionists sometimes go home before the end of their shift, leaving unwritten biopsy reports. In many hospitals, pathologists type their autopsy and biopsy reports themselves. In consequence of the authoritative management style, ingrained in Russia, some professionals accept working in any condition without making an effort to set things in order, keeping the interest of patients in mind. There are not enough young laboratory technicians partly because of the low salaries. Consumption of alcohol at work was not infrequent, noticed to be associated with confusion of specimens. Admittedly, alcohol consumption has decreased while discipline seems to be improving.

Practical difficulties result also from the existing system of post-graduate training. To become a specialist in pathology, a 2-year ordinatura without preceding internship is the usual way. An alternative is a 3-year aspirantura that includes research for a candidate's thesis. Ordinators and aspirants are on average not overworked; they come not every day to the department and often leave before noon. According to a survey, 78.5% of ordinators (on the 2-year postgraduate program) and 78.8% of aspirants (on the 3-year program) combined their training with a part-time occupation, which in 1/3 of cases was non-medical (Kabanova and Lozhkevich 2008). The aspirants are concerned predominantly with their scientific work, which is sometimes done in a rather formal way. Some technicians prepare specimens for aspirants and other researchers during working hours against payment. On the other hand, experts highly experienced in histopathology were often overloaded because they have to perform most of the grossing (in other countries this work is done mainly by residents). Remarkably, postgraduate training at the Department of Pathological Anatomy of Sechenov Medical Academy (a leading institution where textbooks have been written) included no gynaecological material for the simple reason that the Institute of Obstetrics and Gynaecology had their own pathology department. Young pathologists received their certificates without seeing a single curettage. More details about postgraduate training are in Chapter 8. In connection with the professional education, shortage of modern literature should be mentioned. Some handbooks donated by foreign colleagues were used in the department.

In the case of many patients who had previously been in other hospitals, histological slides of the biopsies performed in the past have been reviewed in the department. The original biopsy report was often missing, but information was available from the clinical records. Absence of gross descriptions made the re-examination difficult in some cases. Wrong diagnoses were sometimes found at such revisions; but the original pathologist did not get any feedback, so that the opportunity for quality improvement is lost. The revisions confirmed the known fact that the quality of biopsy reporting at some hospitals outside the capital is comparatively low.

All told, Russian pathology has good aspects. Pathologists practice in close contact and consultation with clinicians, although part-time employments can hinder this. There are talented technicians producing thin slides using old microtomes. Improvements in the Russian economy make it possible to modernize equipment and introduce new methods; although some institutions are investing in building repairs but not enough in the modernization of equipment.

### **The practice of pathology and mortality statistics**

It is written in the article by Kharlamov (2017): "The cardiovascular (CV) mortality in Russia alone remains much higher than, if to exemplify, the total mortality in the United States." The causes of the high registered CV mortality in the former Soviet Union (SU) and of its increase after 1990 is evident for anatomic pathologists. Since the Soviet time, autopsy remained obligatory for all patients dying in hospitals; but the quality deteriorated especially during the

1990s. The autopsies were often made perfunctorily. An example: in 1998, trainee pathologist Tertychnyi (today professor of the Sechenov University) performed an autopsy and wrote as a post mortem diagnosis “cancer of oral mucosa” without examining the oral cavity, on the basis of a preceding cytological report mentioning atypical cells. The diagnosis was approved by seniors. In the same department of the Ostroumov hospital, aplastic anemia was diagnosed post mortem referring to clinical data in a patient having red bone marrow in the femoral diaphysis without its histological examination and iron stain. Quality decrease in anatomic pathology and the health care in general during the 1990s coincided with the increase in the registered CV mortality. If a cause of death is unclear, it has been usual to write on a death certificate: “Ischemic heart disease with cardiac insufficiency” or alike. A tendency to over-diagnose CV diseases is known also for people dying at home and not undergoing autopsy. It can be indirectly confirmed by the following statement: “Increases and decreases in mortality related to CV diseases... but not to myocardial infarction, the proportion of which in Russian CV mortality is extremely low” (Davydov et al. 2007). The explanation seems to be evident: the diagnosis of myocardial infarction is usually based on clinical or morphological criteria, while ischemic or atherosclerotic heart disease with cardiac insufficiency is often used post mortem without evidence.

The CV mortality rates for different subjects (provinces) of Russian Federation (RF) are presented in tables in the article by Kharlamov (2017). The best proof of the CV mortality dependence on autopsies is the comparatively low figures in the provinces, where autopsy rates are low due to traditions or logistic factors (remoteness), especially in those where Islam is the prevailing confession: the rounded-up CV mortality rates per 1,000 are in Ingushetia - 168, Dagestan - 227, Chechnya - 282; compared to the whole RF - 654. One of the most remarkable differences in CV mortality within European Russia is that between the neighboring provinces of Tula and Oryol: 738 vs. 1,011. About 15 years ago the author visited central pathology departments in both cities. In Tula, the department was equipped with modern devices like in Western Europe; there were also foreign textbooks. At the same time, the equipment in Oryol was almost entirely from the Soviet times. So, the figures probably reflected the difference in the diagnostic quality. For comparison, the CV mortality rates in Moscow and St. Petersburg, where the quality of autopsy is relatively high, are 523 and 674, respectively. The differences between the above-named capital cities and surrounding provinces (523 vs. 797 and 674 vs. 734) are also indicative of the role of the autopsy quality (Kharlamov 2017). Habitual post mortem over-diagnosis of CV diseases is compatible with the “absence of any substantial variation in mortality rates from neoplasms, including those related to alcohol, during the period 1984-1994” (Leon et al. 1997), as cancer is rarely diagnosed without evidence (although it did happen as exemplified above). Moreover, the mortality from lung cancer (requiring X-ray or autopsy for the diagnosis) in men decreased by 17% through the period 1998-2007, while that from breast cancer, rarely remaining undiagnosed, “increased considerably” (Davydov et al. 2007).

Another citation to be commented: “The changes in Russian mortality in the last few decades are unprecedented in a modern industrialized country in a peacetime” (Kharlamov 2017). Indeed, between 1984 and 1994, mortality rates in Russia underwent a rapid decline followed by a steep increase. The magnitude of the fluctuations raised questions about the validity of reported mortality rates. Apparently, an artifact was among the causes of the “huge variation in Russian mortality” (Leon et al. 1997). The mortality decrease after 1985 could have been initially overstated to highlight successes of the anti-alcohol campaign (1985-1988), which has been subsequently compensated by overstated mortality figures; more details and references are in (Jargin 2017a).



Concerning the relatively high CV mortality in Russia, it should be additionally commented that irregular treatment of hypertension and other chronic diseases continues to be a problem (Roberts et al. 2012). There is also a gender-related aspect, partly explaining the fact that “men have been most affected by the recent fluctuations in mortality” (Leon et al. 1997). Male adults are visibly underrepresented among patients in polyclinics. Medical surveillance and regular checkups, maintained in many factories and institutions during the Soviet time, have been discontinued or reduced. There is also mistrust in some people towards medicine because of its commercialization. For these and other reasons, some people with chronic diseases stay at home and receive no adequate treatment. An improvement tendency has been noticed: the “27% 10-year decline of CV mortality” (Kharlamov 2017) might be caused both by a true mortality decline and by the reduction in the post mortem over-diagnosis of CV diseases.

The following causes of the relatively high mortality in RF should be pointed out: insufficient availability and quality of the healthcare and toxicity of some alcoholic beverages legally sold in shops. There is a tendency in Russian literature to exaggerate alcohol abuse and its cause-effect relationship with mortality, particularly CV mortality (Jargin 2017a,b). In this way, responsibility for the increase in mortality after 1990, partly caused by shortcomings of the healthcare system and toxicity of some legally sold alcoholic beverages, is shifted onto the patients, as being a result of self-inflicted diseases due to excessive alcohol consumption. For example, in an autopsy study, all 654 deceased alcoholics were diagnosed post mortem with cardiomyopathy (Paukov and Erokhin 2004). According to a later publication by the same authors, cardiomyopathy was diagnosed in 696 of 787 deceased alcoholics, whereas in almost all 172 deceased individuals who had been treated for alcoholism, cardiomyopathy was graded as pronounced (Erokhin et al. 2012). According to an estimate, registered cardiomyopathy mortality in Russia is about 100-fold higher than in Finland, France and the United States (Govorin and Sakharov 2012). Reportedly, clinically significant cardiomyopathy was diagnosed in ~50% of habitual alcohol consumers (Vertkin et al. 2009). These figures seem to be unrealistic and indicate the overdiagnosis. For example, the diagnosis of cardiomyopathy was routinely used in cases of sudden death of alcohol consumers (Paukov and Erokhin 2004), whereas the true cause could have been poisoning with poor-quality alcohol or an unknown disease.

Stroke has also been overdiagnosed post mortem. Contrary to myocardial infarction, gross features of a brain infarction can be mimicked by artificially destroying brain tissue, for example by a junior pathologist or postgraduate student not inclined or unable (e.g. because of a lack of toxicological tests) to search for a true cause of death. The author observed such cases of false-positive autopsy diagnosis of brain infarctions in an academic institution, and they probably happened more frequently in pathology departments of hospitals with no quality control. Unreliable post-mortem diagnostics has probably contributed to the relatively high registered stroke mortality in Russia (Thayabaranathan et al. 2022).

Considering the above, intriguing differences between Norwegian and Russian samples reported by Iakunchykova et al. (2020) can be better understood. The levels of serum lipids were slightly higher in Norway possibly due to more animal fat in diet. Interestingly, N-terminal pro-b-type natriuretic peptide (NT-proBNP), high-sensitivity cardiac troponin T (hs-cTnT) and high-sensitivity C-reactive protein (hsCRP) were higher in Russia. It can be reasonably assumed that average levels of these markers inversely correlate with a nation's health. The hsCRP elevation was reported to be associated with inflammatory conditions. The natriuretic peptide (NP) participates in opposing the vasoconstriction and sodium retention. A plasma NP elevation was found in essential hypertension, decreasing with effective



antihypertensive therapy. As for hs-cTnT, it is a biomarker for myocardial damage, but other conditions are also associated with its enhanced level: diabetes, chronic obstructive pulmonary disease (COPD), decreased renal function, anaemia. Details and references are in (Jargin 2020). The insufficient access to modern healthcare, higher consumption of alcohol and cigarettes in Russia vs. Norway (the data are Wikipedia), as well as poor quality of alcohol legally sold in Russia (Jargin, 2017b) have probably contributed to a higher morbidity and mortality.

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## **Chapter 10. Book Summary: Misconduct in Medical Research and Practice**

The book by Jargin (2020a) about scientific misconduct has been published recently containing abundant documentary evidence as illustrations. Here is a brief summary. The numbers of sections below correspond to the chapter numbers of the above-mentioned book.

### **1. The background**

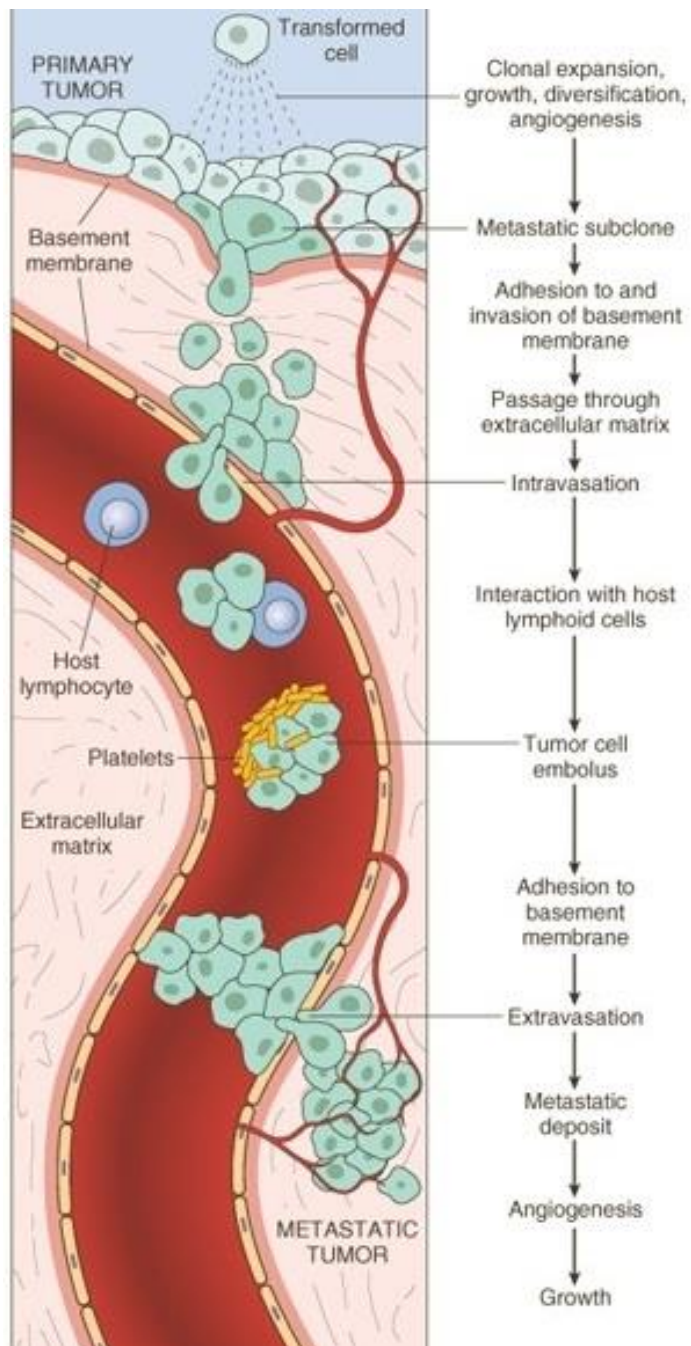
The main varieties of scientific misconduct include falsification, misquoting and plagiarism. Besides, there are many subtypes: biased selection of data or specimens, discarding of “inconvenient” data, selective citation, publications without approval of the text by all co-authors, gift or honorary authorship, nepotism and companionship with mutual cover-up; violations of the rules of polemics, evasion from constructive discussion and questions at conferences, tangling of scientific texts and presentations, making them incomprehensible.

Scientists, editors, and authorities should jointly combat the misconduct. Whistleblowers must be protected from revenge. The quality of research and hidden conflicts of interest should be taken into account deciding which studies are to be included into reviews. Forged publications and speculative theories have been used for promotion of drugs, dietary supplements and treatments without proven effectiveness and/or with possible adverse effects. Patients can be misinformed not only by advertisements but also by publications supposed to be scientific. It has become usual practice to disregard published criticism in spite of personal communications and debates at conferences. Some scientists seem to make use of critical comments without citing them, or just continue publications ignoring the criticism; examples were described by Jargin (2015). The same scientists continue working sometimes in cooperation with renowned researchers; and it is possible that some later articles are more reliable than earlier ones. However, it is insufficient to hope that reliable papers would be shortly confirmed while forgeries would fall into oblivion. Fake papers are misleading for research and practice, costing time and money. Wrong concepts are persisting and re-emerging, which can result in useless experimentation and application of invasive methods without indications. Some scientific writers have perfected themselves in tangling their texts, making evaluation increasingly difficult. Scientific misconduct also includes measures against whistleblowers. The fact of denunciation and the informer’s identity sometimes became known to the perpetrators with undesirable consequences for the whistleblowers up to a dismissal (Fig. 10-1).

In Russia, there is a Higher Attestation Commission, generally known as VAK, the main purpose of which is maintenance of a high level of scientific research. The VAK awards or approves of all academic degrees. Nevertheless, there are dissertations (theses) with detectable trimming of data, manipulations with statistics, misquoting etc., for example, the doctoral thesis of the chancellor (since 2010) of the Sechenov Moscow Medical University (previously named Sechenov Medical Academy) Petr Glybochko (2001) contains numerous inaccurate citations.

### **2. Examples of plagiarism**

Among plagiarists are functionaries occupying high positions in academies and universities (Fig. 10-1). Students and young researchers learn from them that scientific misconduct brings success and profit. This is against the principle “No one can take advantage of his own wrong”.



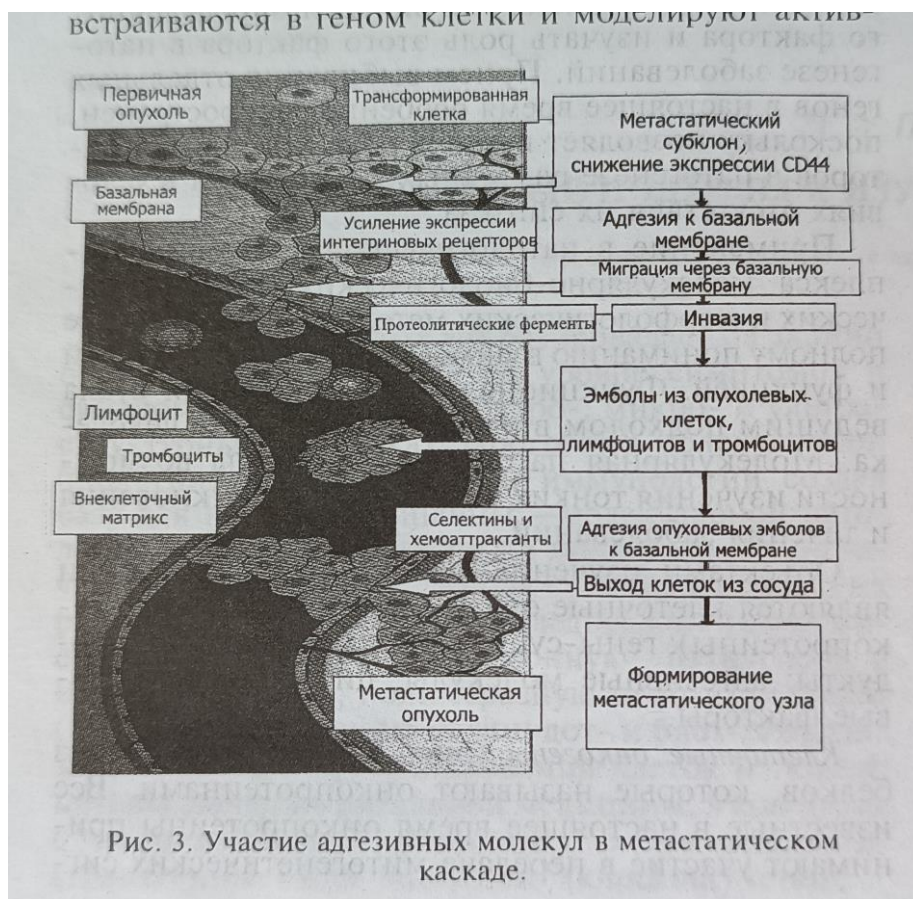
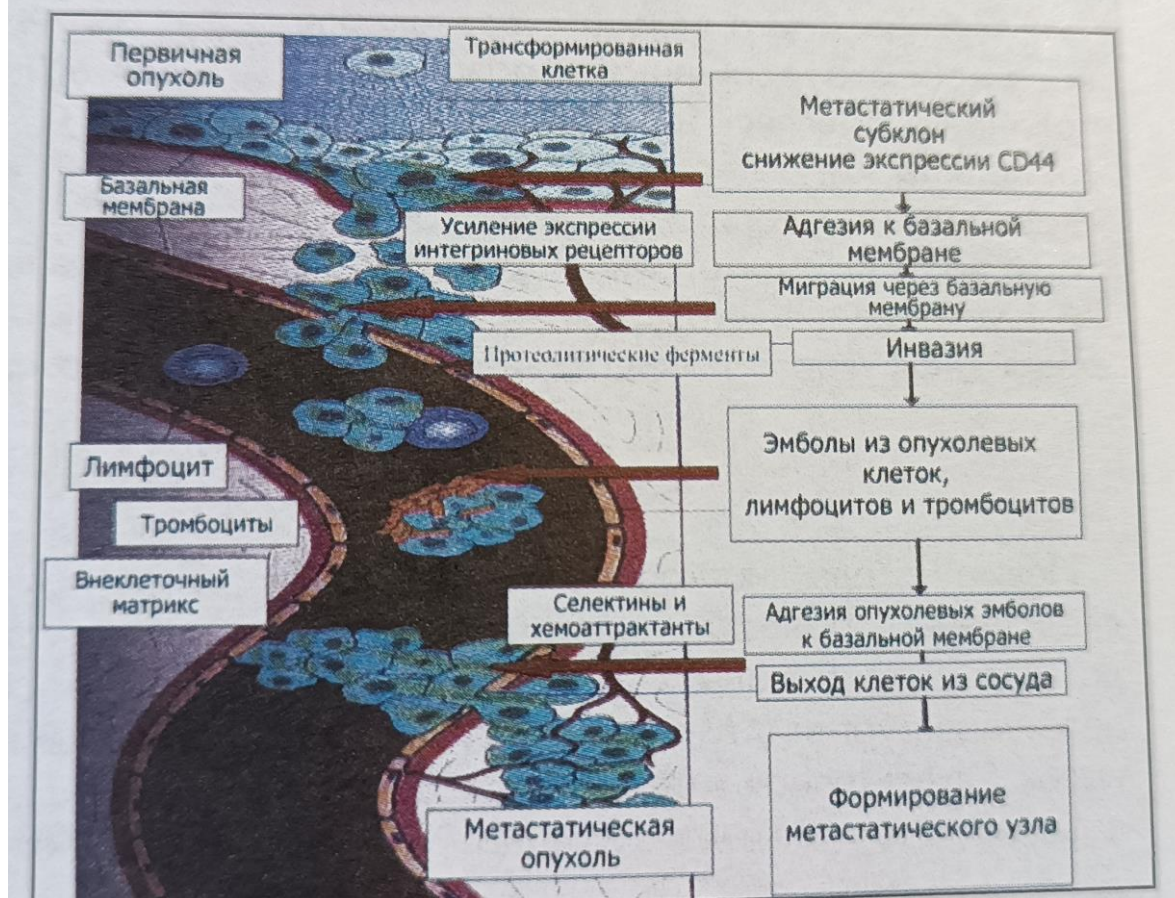


Рис. 3. Участие адгезивных молекул в метастатическом каскаде.



токина или ростового фактора  
 одуцируются этот или несколь-  
 или ростовых факторов, влия-

Рис.4. Участие  
 адгезивных молекул  
 в опухолевом метаста-  
 тическом каскаде



**Fig. 10-1.** A diagram that appeared in the textbook by Cotran et al. (1994) has been reproduced in two articles without references by Mikhail Paltsev (1999a,b), the former Chancellor of Sechenov Medical Academy in Moscow (1990-2009).

### 3. Plagiarism in dermatopathology

The source of the borrowings was the handbook by Lever and Schaumburg-Lever (1975). The borrowings were found in (Tsvetkova and Mordovtsev 1986).

Some translations are shortened and contain mistranslations. Certain additions to the original text are potentially misleading for practitioners.

It should not be left without comment, when the celebrated editions such as the *Histopathology of the Skin* by Walter F. Lever and Gundula Schaumburg-Lever (1975), the classical Robbins' *Pathologic Basis of Disease* or *Handbuch der Speziellen Pathologischen Anatomie und Histologie* by Henke and Lubarsch (discussed below), are rewritten without proper references, mistranslated, and distorted by additions. We can hardly imagine what immense work and immaculate integrity stands behind these great and truthful books. These works and their authors deserve to be treated with respect by exact quotations and references. Today's and tomorrow's plagiarists should be aware that they may be identified and exposed. Otherwise the misconduct would spread over the globe and persist endlessly.

#### **4. How to write a textbook from the Internet**

In the textbook of magnetic resonance imaging (MRI) by Trufanov and Fokin (2007), entire paragraphs were copied from other sources without references. Apparently, the text was translated from English partly not by doctors but by translators insufficiently acquainted with the medical terminology.

Three sources of the borrowing have been identified: an open access website (EMRF Online 2015) and two books partly available online as free previews (Bogaert et al. 2005; Schneider et al. 2006). Neither of these sources was mentioned in the reference list. Copies of the borrowed text from both editions are in the book by Jagin (2020a).

#### **5. Scientific misconduct in environmental (and other) science**

Misinterpretation of statistical data, plagiarism and misquoting were found in the professional literature on environmental pathology. Several examples with photographs from the monographs by Demidchik et al. (1996) and Yablokov (2000) are presented in the book (2020a). The misquoting seems to be tendentious and aimed at the overestimation of medical and environmental consequences of the Chernobyl accident in order to strangle the advancement of nuclear power production in many countries, thus boosting the prices for oil and natural gas (more details are in Chapter 4).

An overestimation of medical consequences of enhanced background radiation in the Semipalatinsk area can be exemplified by the study (Kogan et al. 2002). The following is stated in the abstract about radiation doses: “17 patients (group 1) lived close to the testing area from the childhood to 1993 and were exposed to the radiation at the year dose 0.1 ber.” A radiation dose unit “ber” (Biological Equivalent of Rad), used in Russia, is designated internationally as rem. The annual individual dose of 0.1 rem (1 mSv) is below the global average for annual doses from the natural radiation background, which is 2.4 mSv. The term “radiation carcinoma” was used in the article for lung carcinoma (LC) cases with unproven etiology, while suppositions were made about their rapid growth and “bad prognosis” (Kogan et al. 2002), thus creating an exaggerated impression about medical consequences of the slightly elevated background radiation. The following data are remarkable (verbatim from Russian): “The specific cytogenetical feature of LC in patients from the area of Semipalatinsk was the neuroendocrine differentiation of cancer cells in all tumours independently of their histological structure. We have established it by means of immunohistochemical and ultrastructural investigations.” At the same time, “No neuroendocrine differentiation was shown in the control group” (Kogan et al. 2002). It means that the marker determined by two independent methods appeared in the first group in 100 % of cases (17/17) and in the control group - in 0 % (0/40). The extremely high statistical significance of the difference between the two groups ( $P < 0.0001$ ) confirms the supposition that the “LC in persons exposed for a long time to radionuclide radiation pollution” (Kogan et al. 2002) is a special entity, different from spontaneous LC. It was concluded that “LC in patients, who resided in the area of Semipalatinsk and underwent elevated radioactivity, can be classified as neuroendocrine carcinoma”. It remains incomprehensible, how could all 17 randomly selected LCs belong to the supposedly radiation-induced neuroendocrine carcinoma. In the general population, tumours from neuroendocrine cells (small cell carcinoma, carcinoid tumours) represent about 20-30 % of lung malignancies (Cotran et al. 1994). At the same time, the distribution according to the age and sex in the first group was typical for spontaneous LC caused by smoking, industrial air pollution and other factors: 15 from 17 patients belonged to the age group of 51-70 years. Under the influence of radiation, affection of younger persons could be expected. Especially typical for spontaneous LC is the male predominance because of the

smoking and professional carcinogens. Radioactive contamination of the environment, on the contrary, would exert an equal effect on both genders. In the group from Semipalatinsk area were 16 men and one woman.. (Sagindikova 2001). The term “radiation carcinoma” and speculations about its rapid growth and “bad prognosis” (Kogan et al. 2002) can contribute to an exaggerated impression about medical consequences of slightly elevated radiation background and overtreatment of supposedly radiation-related lesions (Chapter 4). Publications of this type, similarly to those about the Chernobyl accident discussed in Chapter 4, contained the following flaws: unfounded interpretation of spontaneous diseases as radiation-induced, indication of radioactivity or dose levels without comparison with the natural radiation background, misquoting and manipulations with statistics (Jargin 2023). Some other studies on Semipalatinsk and Chernobyl by the same scientists contain analogous drawbacks (Sagindikova et al. 2007, 2008a,b). For example, in the research by Kogan et al. (1999), discussions on molecular-genetic features of the Chernobyl-related “radiation cancer” is led on the basis of 15 random autopsy and surgical LC cases from areas quite distant from Chernobyl: eight cases were from the Tula province in Russia. Other related examples have been presented by Jargin (2022).

The last recently detected case of misquoting is presented here. It is written in the paper by Razvodovsky (2014) with reference to the article by Kim and Johnston (2011): “In 2002 the stroke mortality rate in Russia among men age 45-54 years was ten times higher than in France, Germany or Italy.” There are no such statements in the latter article; neither there are breakdowns by age range and sex. Misquoting was found in other articles by Yuri Razvodovsky e.g. (2020), examples are in the paper by Jargin (2020b). As far as we can see, the attitude to citation remains generally irresponsible.

## 6. Historical examples

Several examples of borrowing with occasional deviations from the original are documented in the book (2020a). The source of the borrowings was the *Handbuch der Speziellen Pathologischen Anatomie und Histologie* (Gerlach 1930; Herxheimer 1930; Konjetzny 1928). The borrowings were found in the *Handbook of Pathological Anatomy* (Lazovski 1957; Abrikossov 1957). The Russian text is often shortened compared to the original. Omissions of some phrases caused alteration of the meaning.

## 7. Manipulation with statistics

Misinterpretation of statistical data and manipulation with statistics is a form of misconduct, which has been not uncommon in the former Soviet Union. By the end of the 1980s, some functionaries, predestined for high positions in scientific or educational hierarchy, published and defended as dissertations largely fabricated reports, containing provable falsifications and manipulations of statistics.

An example is presented from the doctoral thesis of the former (1990-2009) Chancellor Sechenov Medical Academy Mikhail Paltsev (1985), who was also head of the Department of Pathological Anatomy at the Academy. Numerous journal articles and several books (referenced in Chapter 2) were published on the basis of this thesis. A graph from the thesis (Paltsev 1985) is reproduced in Chapter 2 (Fig. 2-1). Comment: Four scatter diagrams together with all points are plotted on one graph. The calculation of statistical significance after counting the points and comparison with reference tables has shown that three correlation coefficients ( $r$ ) are insignificant, the given P-values being overstated. Note that all linear correlation plots, which are supposedly independent from each other, cross in one and the same point. This is extremely improbable. More examples of manipulated statistics are in the book (2020a). Some risk for patients was caused by renal biopsies taken for scientific



purposes from patients with renovascular hypertension sometimes also from the contralateral kidney (opposite to the renal artery stenosis) (Paltsev 1985).

## **8. From the history of Russian pathology**

Doctoral and candidate theses (dissertations) as well as regular publications were required to ensure a successful career. Limited technical possibilities and difficult access to foreign literature made the global novelty of research in some fields of medical science hardly possible. At the same time, global novelty and practical significance were officially required from theses. This forced some researchers towards biased presentation of facts and strained interpretations.

In the late-1980s a new phenomenon became apparent: young functionaries, predestined for high positions in the scientific or educational hierarchy, defended evidently fabricated dissertations. Discussions of such reports at conferences turned into public demonstrations of loyalty because experts understood the true value of such studies. A few colleagues dared to criticize these reports; some of them were later dismissed from their positions.

## **9. Scientific misconduct in pathology**

Along with plagiarism, the partial isolation from the rest of the world and ideological bias gave rise to another phenomenon: sweeping criticism of conditions in foreign countries. Several quotations from English summaries of Russian-language articles are presented in the book (2020a). The summaries are cited verbatim, exactly as they are printed in journals and can be seen in PubMed.

“Negative consequences of treatment are observed at least in 16% patients at multidisciplinary hospitals and may result from the causes that are independent of medical staff, but more frequently from errors and inadequate treatment standards due to human factors. Systematic improvement of professionalism, which should be started from some educational reforms at medical institutes, is needed” (Vovk et al. 2007).

Comment: This is a review of foreign literature with extensive criticism of the complications of therapy and professional misconduct in foreign countries. Analogous phenomena in Russia are not mentioned.

Many articles have become available online these days. Nonetheless, some well-known phenomena are sometimes described without referring to original publications, which can be misunderstood as a global novelty.

For example: “The authors present the incidence and specific features of specific bone marrow lesion and the state of normal hemopoiesis and stroma. The criteria for the differential diagnosis of reactive polyclonal lymphoid proliferation in the bone marrow that may accompany many haematological and non-haematological diseases with specific bone marrow lesion in lymphoproliferative diseases are outlined” and further: “According to our results, several histological types of bone marrow involvement in lymphoproliferative diseases can be distinguished: diffuse, interstitial and focal” (Frank et al. 2007). Then follows a usual description of the bone marrow involvement patterns by lymphoma that can be found in many textbooks. The text can be misunderstood as an original description of bone marrow involvement patterns by lymphoproliferative disorders. Numerous related cases are documented in the book (2020a).

## Conclusion

In the beginning, scientific misconduct seemed to be a heritage from the past, but it seems to be spreading like infectious disease. The economic situation is changing; some experts from abroad would probably find reasons to move to Russia. They should be warned: what is awaiting them is harassment, threats, compliance training, etc., if they do not collaborate in everything including participation in dubious publications or sharing with superiors their private e-mail correspondence e.g. with foreign editors. It happened to researchers and lecturers in Moscow, which ended with dismissals (Fig. 10-2); more details are in (Jargin 2011). The response to scientific misconduct requires leadership and guidelines.

Whistleblowers need a safe, confidential place to report misconduct (Smith 2006). The quality of research and conflicts of interest should be taken into account deciding which studies are to be included into reviews and meta-analyses.

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Вадимовича

Отправлено как вложение по электронной почте [info@virology.ru](mailto:info@virology.ru) с пометкой «лично» 12.08.2013

Глубокоуважаемый Дмитрий Константинович!

Разрешите сообщить Вам следующее.

С 08.07.2013 я работаю в названной выше лаборатории. Зав. Лабораторией д-р Николаева Людмила Ивановна сначала требовала моего согласия на публикацию в совместной статье недостоверных, с моей точки зрения, данных, дополнительно измененных с нашей стороны. Когда я отказался, д-р Николаева настаивала на пересылке ей письма, адресованного мне как частному лицу. При этом в переписке использованы резкие выражения и угрозы (см. прилагаемую переписку по электронной почте: вложение 1,2) Все это противоречит общепринятым нормам публикации и переписки. Кроме того, Людмила Николаевна теперь упрекает меня в подане совместной статьи (см. вложение 1), хотя тема обговаривалась, было достигнуто согласие подписана соответствующая бумага (вложение 3).

Кроме того, д-р Николаева с первых дней настойчиво ведет со мной разговоры на политические, расово-этнические темы, о евреях, об эмиграции и работе в США и т.п. Очевидно, имеет место недоразумение: я русский по матери и отцу и в США никогда не работал. Кроме того, д-р Николаева часто заводит разговоры об окровавленных танках на Курской Дуге и т.п., что неприятно слышать тому, у кого есть коллеги и друзья в Германии. Я неоднократно просил Людмилу Николаевну избегать подобных тем, сначала устно, а затем письменно (вложение 2). Кроме того, в лаборатории имеется ряд нарушений, о которых я мог бы сообщить отдельно.

Я опасюсь, что не смогу работать в сложившихся обстоятельствах. Писать заявление об увольнении по собственному желанию я не могу, так как это вызовет нарекания со стороны Службы занятости, которая дала мне направление. Кроме того, мне нужно где-то доработать 2-3 года до пенсии. Очень прошу Вас помочь перейти в другое подразделение или учреждение.

С уважением,



Ярин С.В.

Вложение: 3 файла

**Fig. 10-2.** Harassment applying provocative talks on politics at workplace by department head and her associate (Nikolaeva et al 2013), reported to the head of the institution. More images are at <https://www.researchgate.net/publication/312376851>

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31.10.2014

Глубокоуважаемая Вероника Игоревна!

Разрешите обратить Ваше внимание на серию исследований с введением суспензий аллогенных клеток в коронарные артерии большим дилатационной кардиомиопатией (1,2). Показания для использования данного метода были сформулированы на основе данных и тенденционных данных. Несколько примеров (см. помеченный текст в приложениях 1,2):

В статье (1) со ссылкой на (3) указано: «Трансплантация миоцитов и мультипотентных стромальных клеток (МСК), которые могут замещать поврежденные кардиомиоциты и восстанавливать сократительную функцию миокарда ... может быть целесообразной».

Однако в редакционной статье (3) ничего не говорится о замещении поврежденных кардиомиоцитов и дается следующая рекомендация: «Мы рекомендуем проводить опыты на новых клинических испытаниях вплоть до получения информации, необходимой для адекватной оценки имеющихся результатов и получения ответов по ряду важных вопросов» (3).

Вторая ссылка № 14 после приведенной выше цитаты отсутствует в списке литературы статьи (1), где за номером 13 сразу следует № 16 (см. приложение 1).

Далее в статье (1) со ссылкой на (4) утверждается: «Миоциты и МСК не несут на своей поверхности генов [вероятно, имелись в виду антигены] гистосовместимости II класса».

В статье (4) антигены гистосовместимости не упоминаются.

Об «обнадеживающих результатах» (1) говорится со ссылкой на рекомендации American College of Cardiology/American Heart Association (5), где клеточная терапия не упоминается.

Пример тенденциозного цитирования: в статье (2) со ссылкой на (6) утверждается: «Эти клетки лишены иммунопривилегированности, не несут на своей поверхности главного комплекса гистосовместимости 2 типа».

В статье (6) говорится: «Мезенхимальные стволовые клетки гиалиномногогенны, часто не несут главного комплекса гистосовместимости 2 типа».

Введение в коронарные артерии аллогенных клеток представляет собой интраваскулярное чужеродное тело, что сопряжено с риском иммунопатологических реакций. Даже если допустить, что МСК «иммунопривилегированы» (2), остаются вопросы, насколько гомогенны популяции вводимых в коронарные артерии получаемых из абортного материала клеток (1), не несут ли они других антигенов, исключены ли первые вирусы и пр. Согласно статье (1,2) в культурах было «не менее» 80-90 % МСК. Действие провоспалительных факторов может быть нежелательным особенно при дилатационной кардиомиопатии, в патогенезе которой, по крайней мере, в части случаев, участвуют иммуно-воспалительные механизмы. Ранее сообщалось о нарушениях коронарного кровообращения и микроинфарктах после интракоронарного введения аллогенных клеток

в эксперименте (7). По данной теме нужно сделать непредвзятый обзор литературы. Мой обзор литературы на тему о стволовых клетках (8), см. приложение 3.

Клинические исследования с интракоронарным введением аллогенных клеток допустимы только после подтверждения безопасности и эффективности этого метода в серии экспериментов, защищенных от коммерческих интересов. В частности, в таких экспериментах нужно изучить миграцию, выживаемость и размножение вводимых в коронарные артерии меченых аллогенных клеток, морфологически оценить воспалительную реакцию в разные сроки после инъекции. Ввиду предполагаемого паракринного действия вводимых клеток, наряду с незрелыми «стволовыми» можно в сравнении испытать введение суспензий зрелых клеток (8), используя в качестве контроля интракоронарное введение физраствора.

Несмотря на один детальный исход, на материале 16 больных без контроля в статье (1) сделано заключение: «В проведенном нами исследовании нежелательных явлений не наблюдалось». Выполнено еще одно исследование (2) с привлечением большого числа больных, методика рекомендована для практического использования.

Разрешите обратить Ваше внимание на то, что соавтором публикаций (1,2) является генеральный директор производящей клеточные культуры ЗАО РеМедЭкс, д.б.н. Гольдштейн Д.В., то есть, очевидно, имеет место конфликт интересов, о котором в соответствии с мировой практикой при статьях необходимо публиковать соответствующую информацию.

С учетом изложенного, прошу Вас принять меры по предотвращению использования инвазивных методик без достаточных показаний под влиянием коммерческих интересов.

Яргин С.В.

Приложение: статьи (1,2,8), всего 15 стр.

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**Fig. 10-3.** A letter to the Ministry of Health reporting invasive procedures performed without clinical indications and non-disclosure of a conflict of interest.

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## Chapter 11. Child abuse

Child abuse has been rarely discussed in the Russian literature. Several booklets were published in the period 1990-2016 but today the topic is largely avoided. During medical education and postgraduate training in pathology, the author hardly ever heard about child abuse. In the literature, the accent is often on visible injuries: bruises, burns and fractures. Of note, child abuse can continue for years with cerebral concussions, burns of oral/esophageal mucosa and intoxications without externally visible injuries, exemplified by the case report below. According to some estimates, the prevalence of family violence in Russia during last decades has been 45-70 times higher than, for example, in England and France (Besschetnova 2015). According to a recent report, about 40% of all serious violent crimes in Russia are committed within families; 14% of children are subjected to physical abuse, 2 million are regularly beaten by parents while 10% of them lose their lives as a result (Borisov et al. 2020). According to other sources, 40% of children are beaten in families (Agafonova et al. 2011); 31% experience sexual abuse and 41% suffer cruel punishments (Tinkova and Katilevskaia 2016). It was reported in 2016 that the General Prosecutor's Office records about 2 million children beaten by their parents yearly, whereas 10% of the cases end in death, of which about 2 thousand by suicide (Alekseeva 2016). Yet in 2017 Vladimir Putin has signed into law an amendment that decriminalizes some forms of domestic violence (Walker 2017). Apropos, physical abuse was described in his biographies (Baker and Glasser 2005; Ihanus 2022; Ressler 2017). It has been hypothesized that Putin is re-enacting his own and his family's traumas in conditions of an intergenerational chain of violence (Ihanus 2022; Elovitz 2022). There is a "danger of blundering into a nuclear war" (Elovitz 2022) thanks to that case of child maltreatment. More details are in Chapter 15.

The self-referral rate of victims of domestic violence in Russia is low; among reasons are distrust of authorities, fears of revenge from perpetrators or of humiliations and breach of secrecy in the course of investigation. In case of disclosure, not only abusers but also victims are sometimes blamed (Alekseeva 2012). Detection of family violence often depends on victims. It is easier to denounce a socially unprotected abuser e.g. an alcoholic. Otherwise, various defenses can be applied by perpetrators: denial of facts, allegations of slander and/or mental abnormality in the victim, threats and intimidation, appeals to preserve honor of the family or nation. The intergenerational transmission of violence is evident in many families (Tinkova and Katilevskaia 2016). The attitude of some professionals and a part of the population is tolerant (Alekseeva 2016; Safonova et al. 2001). Authorities, teachers and neighbors did not react to some known cases of child maltreatment. There is neither official standpoint nor agreed policies (Besschetnova 2003, 2015). Investigations are started mainly on official request. Numerous children continue living in conditions of abuse potentially harmful for their physical and mental health (Tinkova and Katilevskaia 2016). The predominant way to solve problems of child abuse has been a placement in an orphanage (Alekseeva 2016). The institutionalization means that not the abuser but the victim is removed from the familiar environment, suffers deprivation and discomfort (Alekseeva 2012).

### Case report

A 2-years-old boy (S.), playing in a yard of a suburb house, was hit by a stone in his left temporal area. The stone was thrown by an older child; the stone-throwing went on for some minutes; the mother sat in shadow and watched. An immediate medical help was not sought; the boy stayed in bed for several days. Transitory neurological symptoms were observed: strabismus, blepharoptosis, dysphagia with aspiration of food. Moderate symptoms compatible with Klüver-Bucy or frontal lobe syndrome were observed (Jargin 2020), which



has been reported after head trauma including minor one (Asensio 2003; Olson 2003; Salim et al. 2003). After the accident, the child was often brought to medical institutions mainly by his grandmother (mother's aunt) but the head trauma was concealed from doctors. The mother, an orphan, had been adopted by her childless aunt, who physically maltreated her stepdaughter during the latter's childhood.

When S. was three years old, his parents were divorcing; and he was sent with a nanny to a suburb. They spent there also two subsequent summers, having almost no contact with other children. The boy sat on a sofa or bench days on end and was often locked up alone in the room, which did not contribute to his physical development and communication skills. There were repeated burns of the oral mucosa, esophagus and genital area by hot porridge or soup; consequences are felt at the advancing age. The nanny gave alcohol to the child. At the age of 6-7 years, S. underwent adenoidectomy and tonsillectomy with insufficient local anaesthesia and questionable indications. Later it has become clear that he has allergic rhinitis; but symptoms were regularly exaggerated by the grandmother with a refrain: "Something must be done about it!" After years-long antibacterial and decongestant therapy, adenoidectomy was performed. As for the tonsillectomy, relapsing tonsillitis and pharyngitis was apparently caused by burns: the hungry child was given nearly boiling hot porridge, soup or tea. A proof thereof is that pharyngitides discontinued when the child grew older and stopped swallowing the hot stuff. Burns are common in child abuse but not always easy to evaluate (Crosson-Tower 2002). Symptoms of an esophageal stricture have become increasingly disturbing after the age of 50 years, up to difficulties in swallowing solid food. Moreover, the grandmother was insisting on eye surgery because of above-mentioned strabismus. The child was repeatedly brought to an ophthalmological institution, the surgery was considered; but doctors adequately assessed the findings and the surgery was denied. Strabismus spontaneously disappeared before the school age.

When S. was 7 years old, his mother married a 13 years younger individual of non-Russian ethnic background, who wanted to live in Moscow. The following risk factors of the child maltreatment (Hindley et al. 2006) were present: poor social support, presence of a younger child, family history of abuse - the perpetrator had been beaten by his father. The abuse was administered mainly by slapping in the face and head. The beating often occurred under the pretext of punishment, but sometimes without any pretext. Episodes of violence went along with intimidation by gestures. The physical abuse sometimes occurred before spectators: the mother, relatives or friends. Occasionally, the mother participated in beating, which is in agreement with reports that mothers abuse their children more often, when their partners are not fathers of the victims (Alexandre et al. 2010). In several cases, the child abuse was associated with sexual activities of the caregivers; the stepfather got up from the marital bed and whipped the child with a belt without putting on his pants. Rarely, the young husband applied violence also to his wife. When the boy was 12-13 years old, a visiting alcohol-consuming family friend climbed into the child's bed; fortunately, the boy was able to defend himself. It should be commented that the victim was "trained" not to make noise when abused. Nonetheless, the scene was loud enough to be heard through the small apartment; the stepfather laughed about it in the morning. Undoubtedly, the scenes of abuse were heard by neighbors in the thin-walled apartment block; but nobody intervened. Apart from irregular nourishment, an example of neglect was a deprivation of training clothes during early school years. The boy was sent to gymnastics lessons inappropriately dressed, so that his genitals were visible during exercises, in spite of written reprimands from the teacher and the child's repeated begging. This was one of the immediate causes of the bullying at school as well as of

delayed physical development: the teacher let the boy sitting on a bench during gymnastics lessons.

As mentioned above, superficial scald burns of the genital area occurred to S. in early childhood. Immediate medical help was not sought. Subsequently, the fact of the burn was concealed from medics. When the healing ensued, the child started scratching the area. Seeing that, the mother pinched his genitals with considerable force. Her partner did the same once at least. In the meantime, symptoms of balanoposthitis were repeatedly noticed. The child was brought to the surgeon who diagnosed phimosis and performed repeated manual retraction of the foreskin. Along with the pubertal development, the foreskin became completely and permanently retracted; at an older age the penis binding with soft cloth has become necessary because of the skin vulnerability. Finally, it should be mentioned that the caregivers not only induced abnormal behaviors by maltreatment but also spread information about the child's supposed abnormality as a justification for the "strict upbringing" and corporal punishments. Apart from other medical specialists, psychiatrists and neurologists were visited. At the age of around 7 years S. received potassium bromide and some tranquillizers, thereafter communicating with same-aged peers, which probably contributed to inadequate behavior and bullying. It is known that abuse at home places a child at risk for inadequate peer relationships (Lewis 1989). Children experiencing maltreatment often develop maladaptive conduct (Garbarino et al. 1995). Finally, child abuse impeded the school learning, which agrees with the literature (Cicchetti et al. 1995). The case report should end on a positive note. After 2 years of military service and altogether ~3 years of work in the North of Russia, the final outcome has been largely acceptable; although insufficient adaptation to the society and shame accompanied S. through his life. Fortunately, many survivors of child abuse learn not to dwell in the past imbued with helplessness and pain (Crosson-Tower 2002).

## Discussion

The special feature of the case presented above is that there were two perpetrators, the grandmother and mother, who acted by mutual consent before the latter moved to a separate apartment with her new family when S. was 8 years old. The following arguments in favour of malicious intent leading to the medical abuse should be pointed out. Bringing the child repeatedly to doctors and exaggerating symptoms, both perpetrators were aware of possible complications as they had negative experiences with the Soviet healthcare mainly in the field of Gynaecology. The mother complained about harsh and painful Gynaecological manipulations and abortions. The grandmother had an enlarging ostrich-egg-sized hernia in a hysterectomy scar probably as a result of poor procedural quality. Moreover, she was crippled by a Halsted mastectomy performed for T2 stage breast cancer (BC). The worldwide tendency towards a sparing BC management was not followed in Russia for decades. In the 1980s and decreasingly in the 1990s, the Halsted procedure with the removal of both Pectoralis muscles was a predominant method of BC management; it was presented as the main treatment modality of BC in some textbooks and monographs published after the year 2000 (discussed in Chapter 1). The principle of informed consent was often disregarded. Patients with early cancers were subjected to mastectomies with resection of pectoral muscles without discussing the extent of operation and potential adverse effects.

Behaviors developed by abused children may be interpreted by the social environment as a mental abnormality or defectiveness (Alekseeva 2012; Tinkova and Katilevskaja 2016). A case is known to us when abusive caregivers intended to send a child with autistic traits to a school for mentally retarded. The hypothesis has been proposed that some autistic individuals may be physically abused children with attention deficit hyperactivity disorder (ADHD),

histrionic and some other disorders, or initially typical ones. In this connection, the heritability of autism spectrum disorder has a non-genetic mechanism in some cases: children of deviant parents are exposed to the maltreatment, hence acquiring deviant traits themselves. It has been argued that individuals with some disorders or neuroses (for example, obsessive-compulsive disorder) were on average more often beaten during their childhood than those with other conditions e.g., hysteria (Jargin 2023). Besides, an intergenerational chain of violence is a known phenomenon. An adolescent regularly punished for hyperactivity or hysteric behavior might discontinue it but start obsessive activities. Finally, it should be mentioned that some children with ADHD exposed to trauma develop borderline personality disorder (Ditrich et al. 2021). Apparently, the latter development is more probable in disorganized conditions with haphazard traumas rather than under impact of regular and targeted physical abuse. This topic needs further research.

## **Conclusion**

There is evidence in favour of associations of child maltreatment with adverse mental health, physical health and social outcomes, deficient communicative skills, substance abuse and, in particular, overuse of alcohol. Trajectories of certain conditions may depend on extrinsic factors: in an environment tolerating impulsivity, hyperactivity, hysterical or otherwise annoying behaviors, a child would preserve initial symptoms or evolve in a more typical way. In conditions of physical abuse, consistently punishing behaviors regarded by abusers to be undesirable, a child would develop adaptive conduct to avoid the trauma or to cope with it. Child abuse can have long-lasting consequences also for initially typical individuals. In conditions of collectivism, under the social pressure to be “normal” like everybody, adolescents with communication difficulties have strong motives to contact with peers to avoid stigmatization as outsiders. Alcohol is used by some of them to overcome communication barriers. Besides, loitering with drinking companies is a way of escape from domestic violence.

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## **Chapter 12. Elder abuse and parricide**

Elder abuse can have many forms; it is generally under-recognized and under-reported (Bradley 1996). Many doctors are unfamiliar with the corresponding legislation. Victims often exhibit low self-esteem, blame themselves for the abuse, do not want to admit their vulnerability, or 'to betray' their families (Kleinschmidt 1997). The theme is "shrouded in silence, stigma, and shame" (Hunter et al. 2010). Factors associated with elder abuse include advanced age, low income, functional impairment, drug abuse, and lack of social support (US Preventive Services Task Force 2004). Violence may take many forms, often being subtle and insidious (Heilporn et al. 2006). In the literature, parricide is sometimes considered to be a crime committed predominantly by mentally ill individuals (Palermo 2010), often involving excessive amount of destructive violence (Bourget et al. 2007). According to Hillbrand and Cipriano (2007), most parricides belong to two main categories. Adolescent parricides tend to be cataclysmic reactions to enduring, severe physical abuse, perpetrated by an individual who is typically neither conduct disordered nor psychotic. Adult parricides tend to be tragic conclusions of highly conflictual relationships between untreated psychotic individuals and their parents. The typical profile of an adult perpetrator was described as a young single unemployed male, living with his victim, and suffering from schizophrenia with comorbidity of alcohol or drug abuse (Cornic and Olie 2006). Among adult perpetrators, schizophrenia with symptoms of psychosis present at the moment of the parricide, was the most common diagnosis (Bourget et al. 2007). Risk of death from abuse may be higher in older adults with dementia, especially those having greater levels of cognitive impairment (Donget al. 2014). The purpose of this chapter was to warn that borders between elder abuse, resulting in a person's death, manipulation towards suicide, manslaughter and murder can be indistinct. Violence may be subtle and insidious (Heilporn et al. 2006), hardly recognized as such by the social environment.

It is difficult to generalize having no reliable statistics. However, being acquainted with some cases and the permissive atmosphere with disregard for some laws and regulations, it should be stressed that life shortening of an elderly family member can be a strategy, conducted consciously or in part subconsciously. It can include intentional or neglectful acts (Hoover and Polson 2014): involvement in heavy binge drinking, inadequate nutrition, denial of help, manipulation towards self-destructive behavior (smoking, alcohol consumption, taking social risks), persuasion to commit suicide. Such cases can be hardly distinguishable from elder neglect and abuse. One of the most frequent motives is the economic one (Palermo 2010), in Russia, particularly, appropriation of flats and houses. It is known that aged alcoholics and people suffering of alcohol-related dementia have been convenient victims of property-related crime. As a result, many of them have become homeless. The high prevalence of mental diseases, found among those who commit parricide, can be partly explained by the fact that such cases were looked for in psychiatric institutions (Cravens et al. 1985); on the other hand, crime committed by mentally healthy individuals probably more often remains undisclosed.

### **Case 1**

It is understandable that a young man would like to have his own flat; and his mother, divorcing her alcoholic husband, would try to secure the apartment for her son. A large flat was exchanged for 2 smaller ones, for the mother with the grandmother, and for the father and son. According to the Soviet-time registration system, if a person registered alone in a state-owned apartment, it was not inherited by relatives but taken by the state. However, if somebody else had been registered in the same apartment, it usually remained at his or her disposal (if a considerable excess of space resulted, some other people could be settled in).

The father, a habitual alcohol consumer, had been a good engineer but dementia symptoms had become recognizable during the last 3-4 years. Once he went to work and came back an hour later with a head injury that he could not clearly explain. After that, his progressive dementia became conspicuous. At the age of about 54 years, he was unemployed but intended to start working at a workshop for disabled. His son was registered together with the father but lived with the mother and arranged drinking parties in his father's flat, who participated in the binge drinking. The son informed his former schoolmate S. that he had been repeatedly speaking with his father about hopelessness of his condition, saying that dementia would only worsen and his life had no sense anymore, and that they had together decided that suicide would be a solution. Then, he invited S. to participate; his father agreed to commit suicide, and they would just help if necessary. They came in the evening, drank some vodka, and another bottle was left for the next morning. In the morning, after the bottle had been finished, the father was accompanied to a hook in the wall, with a sling on his neck. The case was treated by the authorities as a suicide. Irreversibility of dementia and mercy as a motive were discussed by the perpetrators. In fact, alcohol-related dementia may be partly reversible with abstinence (Gupta and Warner 2008; Pierucci-Lagha and Derouesne 2003). The son demonstrated schizoid and sadistic personality traits: inclination to elaborated reasoning including the idea of murder; in his childhood, he maltreated his grandmother, apparently with an ethnic motive. The grandmother had married a person of non-Russian ethnicity, which supposedly had a negative impact on the grandson's life. As for S., his motives were juvenile curiosity and immediate perspective of alcohol consumption offered by the accomplice. S. maintained that he had not believed until the end that something serious would happen. However, after the father's death, his former schoolmate gave him the apartment key. The anticipation thereof could have been a motive. We do not know whether the mother was informed about her son's plans i.e. whether she was a formal accomplice or not. One of the motives to report this case to the authorities was the son's remark about his present-day father-in-law, a handicapped man living alone in his countryside house: 'I always pour him vodka during our visits. His life has no sense anyway'. It should be mentioned in this connection that adults who killed their mothers and fathers are significantly more likely to kill a higher number of victims (Heide and Boots 2007).

## Case 2

This case shows what can happen to an elderly apartment owner in Russia. In the past, E. worked at a Soviet trade mission abroad. Personnel of the mission were offered an opportunity to purchase apartments or rooms in a new building in Moscow. There were only 3-room flats in that building; E. paid for 2 rooms, and a colleague, who remained single until her death, bought the third one. Later on, the building was expropriated by the state, while owners received certain amounts in rubles. E. had adopted her orphan niece; later the stepdaughter moved with her new family to another flat, while E. remained alone in her two rooms. After the death of the neighbor, a 3-person family was settled into the third room. One year thereafter, E. died and the young family occupied the whole apartment. At that time, E. was 73 years old with no diagnosed serious disease, apart from a hernia in a hysterectomy scar and condition after mastectomy with no signs of relapse. There was no visible evidence of unnatural death and neither forensic examination nor autopsy was performed. The case can be seen as a cynical act on the part of the authorities who settled a young family into one room of the flat, where two other rooms were occupied by an elderly person, obviously in anticipation of her death. It can be also seen as elder neglect on the part of the stepdaughter who had not visited E. until the last day of her life (which can be explained by the fact that E. had previously maltreated her stepdaughter). The reason for reporting this case, on the

background of a variable attitude to private property in Russia, is that neighbors and other persons were informed about the event. The permissible atmosphere is maintained by such cases, as well as overt crime for misappropriation of apartments and houses, which is known to happen in Russia and would increase if not exposed and no appropriate measures would be taken.

### **Case 3**

On the first sight, this case does not look like parricide. A widow aged 54 lived with her adult son in a 2-room apartment. The son treated his mother rather harshly, sometimes battered her, opened her correspondence, and forbade her using a computer: "You will make a mess!" He said that if he would not look after her, she would drink alcohol and behave immorally. In fact, however, it was physical and emotional abuse that obviously moved her towards alcohol misuse and chain-smoking; she was emaciated and suffered from chronic bronchitis, complicated thereafter by pneumonia; she often fell down in the street slipping on ice and already had several fractures. The social environment showed no reaction. After the case has been reported, the perpetrator was contacted, and the living conditions of the victim have improved.

### **Discussion and conclusion**

For prevention of parricide, it should be devoid of the reputation as an unusual horrific crime, committed by mentally ill individuals. Parricide can have trivial appearance, sometimes hardly realized as such by the victims and social environment. Perpetrators can be mentally healthy or have a personality disorder. Anger, discussed in connection with parricide (Malmquist 2010; Palermo 2010), can be absent in perpetrators but present in the victims maltreated by their family members. The health care and social workers should take it into account and adequately react to abuse and neglect of elderly people (Killick and Taylor 2009).

Older men, not inclined to sit with grandchildren, are sometimes manipulated towards self-harming behaviors, inducing them to neglect their own health, drink more alcohol, to smoke etc. Shortage of apartments and desire of younger people to have their own flat can be a motive. After the economical reforms in Russia, along with privatization of many apartments and their rise in price, commercial interests have come to the foreground. Crime against unprotected citizens including alcoholics has become widespread since 1990, being tolerated by the society and its institutions. Undue pressure, assault and battery, was exerted by property dealers and criminals associated with them, manipulating some people to vacate or change their places of residence (Jargin 2015).

Parricide and geronticide were practiced in the pre-historic time as well as in primitive and traditional societies (Dhar 2000; Pillemer and Wolf 1986) including Russian villages (Puchkov 2005), although it can be encountered in any society. The attitude to old people, unable to work, was personified by the evil characters of the folklore: Baba Yaga and Koschei the deathless, who have distinctly senile appearance. The attitude to the elderly in the health care institutions is not perfect even today: middle-aged and elderly men, especially those supposed to be alcohol abusers, are sometimes unwelcome at the state polyclinics. It is known that chronic conditions often remain untreated in Russia; for example, arterial hypertension, one of the leading causes of avoidable mortality in the country (Roberts et al., 2012). In 2008, the difference in life expectancy between men in some West-European countries and Russia was around 20 years (Zatonski and Bhala, 2012). This is a strategic advantage: fewer pensions to be paid, less investments into public health. Admittedly, according to official statistics, the life expectancy is gradually increasing. It should be mentioned in conclusion that most studies on parricide, elder abuse and neglect have been based on research performed in more open

societies while elsewhere it can persist without much publicity. Instructive publications addressed to the broad public are especially important (Hildreth et al. 2011).

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## **Chapter 13. Sexually transmitted infections, sexual and reproductive coercion**

### **Case 1**

A jurist was infected with gonorrhoea (Gn). In accordance with the laws and regulations he went to the dermato-venerological dispensary (prevention and treatment centre), was registered and treated according to instructions by the healthcare authorities. Thereafter the patient said that the treatment was lengthy and unpleasant, and that he will never approach the dispensary again.

### **Case 2**

A son of a retired general (hereafter patient) awarded himself a next rank every time he contracted gonorrhoea. In this way he became a “generalissimo”, illustrating irresponsibility - the patient was proud of his “career”. He was one of the informal leaders of a company that, apart from selling to foreigners icons and coins (fartsovka:

<https://en.wikipedia.org/wiki/Fartsovka>), involved adolescents in the binge drinking and female adolescents into sexual contacts e.g. with participants of international exhibitions in Moscow and foreign truck drivers. Individuals with sexually transmitted infections avoided the dermato-venereological dispensaries, where the treatment was lengthy and unpleasant, and treated themselves with antibiotics. Intramuscular injections of Hexestrol (known in Russia as Synoestrol) oil solution were used to induce abortions - a well-known method in former SU (Muzhanovskii et al. 1992). Of note, the patient was exempted from conscription for a reason unknown to us.

### **Case 3**

A female student residing in a students' dormitory was infected with Gn. It should be mentioned here that some female students were manipulated towards sexual contacts by certain administrators and professors. First time she had not noticed any symptoms. Shortly thereafter she met her future spouse, and a week later was hospitalized to a gynaecology department with the diagnosis of adnexitis. In the meantime, the fiancée developed acute urethritis with abundant discharge of creamy pus. An acquainted physician prescribed them an overseas antibiotic available at some pharmacies at that time but absent at the hospital. The patient took it in addition to the hospital medication. The recovery was complete; there were no relapses. Gn was not diagnosed at the hospital, which permitted the couple to evade some of the procedures described below.

### **Case 4**

A student (hereafter patient) was expelled from a university in one of the Soviet republics and conscripted to the army. During the first month of his service, the patient encountered conflicts and appealed to relatives to help him be recognized as unfit for military service. Some of his relatives were physicians and others belonged to the military establishment. Soon the patient was dismissed from the army and registered at the psycho-neurological dispensary with a diagnosis of psychasthenia. In the author's opinion, the patient suffered from obsessive-compulsive disorder, which is illustrated by his further biography. The patient married a Moscow resident, who was 13 years older than him and had a son 7 years of age. Under conditions of the Soviet registration system, aimed to counteract a mass migration to the capital, real and fictive marriages were often used to obtain a residence permit (propiska) in Moscow. Now as before, the registration and accommodation remain strong motives for large cities attracting migrants. During later years, the patient physically abused his stepson and, less often, his wife. The abuse was administered by slapping in the face and head, often under the pretext of punishment, but sometimes without any pretext. Episodes of violence

were accompanied by intimidating gestures and verbal abuse. Apparently, the violence became the patient's obsessive behavior. Obsessions of aggression including intimate partner violence have been reported in studies on obsessive-compulsive disorder. The patient trustworthily claimed that he regretted the violence but was unable to control himself. However, at conflicts with other persons, he controlled himself, which indicates accountability and neurotic nature of his violent attacks.

### **Case 5**

In the 7th class of a school (13-14 years old children) appeared twin brothers from a southern Soviet republic; both early-ripening. Later it has become known that they seduced or raped several girls, which entailed one abortion at least. One of the girls recollected that it happened so quickly that she noticed it when it was too late; the boy was adroit. Sexual experiences with relatives are not uncommon in certain social and ethnic milieus (Meiselman 1978). It was reported that 49% of "child perpetrators" had been sexually abused prior to their own abusive behaviors (Johnson 1988). Studies indicate a link between the childhood sexual abuse and analogous offences committed by victims in their later life (Johnson 1988; Tanagho et al. 1988).

### **Treatment of gonorrhoea**

Here follow several extracts from instructions by the Ministry of Health, handbooks and manuals that contained essentially the same recommendations. If the signs of inflammation persist longer than 5-7 days after a course of antibiotics, even in the absence of N. gonorrhoeae in urethral smears, a topical therapy was recommended. In the Instruction by the Health Ministry (1993) it was written that in acute gonorrhoea topical treatment should be started after the completion of a course of antibiotics. In torpid or chronic form of the disease, topical therapy is performed prior to the antibiotic treatment (at a hospital) or thereafter (in ambulant patients). The sexual contacts were to be treated in the same way as the patients with chronic Gn, also if no N. gonorrhoeae are found in the smears (Health Ministry 1993). Earlier instructions (Health Ministry 1963) and monographs (Mavrov 1984; Turanova et al. 1983) recommended the topical therapy for acute Gn. The following treatments were recommended: instillations into the urethra of potassium permanganate or 0.25-1 % silver nitrate solution with an additional treatment of focal lesions by 10-20 % silver nitrate via urethroscope. Bouginage, urethral massage on the urethroscope, and tamponade of the urethra were recommended both for soft and hard infiltration (beyond the acute phase) with subsequent smearing of the urethral mucosa by Ichthammol (Ichthyol), a substance derived from oil shale (Mavrov 1984; Timoshenko 1988). Potential carcinogenicity of Ichthammol and Vishnevski liniment containing xeroform and tar (mentioned below) was discussed by Jargin (2014). In a recent edition it is recommended (translated from Russian): "In case of a mixed or hard infiltration a tamponade of the urethra should be performed... Colliculitis is treated by bouginage" (Ziganshin et al. 2010). The same recommendations, including instillations of silver nitrate, tamponade and bouginage can be found in textbooks (Zudin and Kochergin 2013; Drangoi and Eliseev 2009). There was also research on Gn with instillation into the urethra of different substances such as gastric juice, oxygen foam, etc. (Stepanenko and Kolyadenko 1991; Anton'ev 1988a,b).

The tests of cure, recommended for all treated patients, included different kinds of provocations. Chemical provocations in men included instillations of silver nitrate solution into the urethra, in women - smearing of the urethral mucosa with 1-2 % and cervical canal with 2-5 % silver nitrate solution or Lugol's iodine solution with glycerol. Mechanical provocations included urethroscopy and urethral massage on the urethroscope or bougie

(Health Ministry 1993; Zudin and Kochergin 2013). If symptoms reappear, also in the absence of gonococci in the smears, the treatment and tests of cure were to be repeated. The urethral discharge is examined 24, 48 and 72 hours after the provocation; in the absence of discharge, an examination of secretions from the prostate and seminal vesicles was recommended. If no *N. gonorrhoeae* were found after the first provocation, a combined provocation including urethroscopy was to be performed a month later (Health Ministry 1993).

In women, the topical treatment was recommended for “fresh torpid” and chronic Gn (Health Ministry 1993; Drangoi and Eliseev 2009). However, some earlier instructions and monographs recommended topical treatment (urethra washings, instillations) in women also for acute Gn (Health Ministry 1963, 1988, 1993). Bimanual examination (Batkaev 1986) and urethroscopy were recommended in women for diagnostic purposes both in acute and chronic Gn, whereas technical difficulties of the urethroscope insertion were pointed out (Kuntsevich and Golubinskaia 1983). Considerable discomfort must have been associated with those “technical difficulties”. For chronic urethritis the following was, among others, recommended: urethral instillations of silver nitrate solution, smearing of the urethral and cervical mucosa with Ichthammol (Petchenko 1965), with Vishnevski liniment (Mazhbits 1968), urethral massage on the urethroscope, coagulation of inflamed paraurethral glands (Batkaev 1986; Timoshenko 1988; Petchenko 1965), coagulation of cervical ectopies (ectropions). It should be commented that diathermocoagulation (electrocautery), cryodestruction or laser treatment of the cervical ectopy in the absence of epithelial dysplasia was performed routinely. Cervical erosions and ectopies were found at mass prophylactic checkups and treated by electro- or thermocautery (discussed in Chapter 1).

If at the first appointment *N. gonorrhoeae* are not found in the urethral smears, a provocation by means of an instillation of silver nitrate solution into the urethra and cervical canal was recommended (Batkaev 1986). The test of cure included urethroscopy (Health Ministry 1988). The combined provocation in women was performed 7-10 days after the treatment, then repeated after the next menstruation, and then again after 2-3 menstrual periods. The combined provocations repeated thrice have been recommended also for Gn in female adolescents and children (Bogdanova 2011; Gurkin 2000; Kapkaev and Vaisov 1982). If the symptoms persisted, but no gonococci are found in the smears, the treatment as for chronic Gn was prescribed. In consequence of such approach, non-gonococcal urethritis was sometimes treated by means of the topical procedures described above. For women with suspected gonorrhoea and with urogenital inflammatory conditions of unclear etiology, some instructions recommended the same treatment as for chronic Gn (Batkaev 1986; Timoshenko 1988).

The methods of local treatment and provocation described above were not mentioned by internationally used handbooks, reviews and recommendations by the World Health Organization (WHO), while the bouginage was recommended only for strictures. The topical treatment was inherited from the pre-antibiotic era. However, during the 1930s, gentler, observant tactics were advocated (Walker 1938). After the discovery of sulfonamides and especially of penicillin, the topical treatment of Gn and rigorous tests of cure have largely lost their significance. Nevertheless the topical treatment could have been meaningful in some cases because of the limited availability of modern antibiotics in Russia. Furthermore it is not entirely clear to a pathologist, what kind of morphological substrate corresponds to the “hard infiltration”, where the bouginage was recommended (Health Ministry 1988, 1963). Obviously, inflamed and edematous mucosa can be traumatized, possibly contributing to scarring and formation of strictures. Moreover, excessive instrumentation in conditions of

suboptimal procedural quality assurance might have contributed to the spread of infections such as viral hepatitis.

Many physicians realized the obsolescence of instructions and made exceptions. Vaguely formulated recommendations in some manuals left space for individual judgment. Under these conditions, ideation of punishment coupled with irresponsibility has apparently played a role in some medical personnel and health care functionaries. There are witnesses that abortions and Gynaecological manipulations were sometimes performed in a harsh manner and were painful, especially in women deemed socially unprotected or “immoral”. At the same time, pap-smears for early detection of cervical cancer and precancerous lesions have been performed infrequently and not up to international standards (discussed in Chapter 1).

Today the situation is changing. At least at central dermato-venerological dispensaries no mechanical provocations are performed, and instillations are made less frequently than before. The tests for Chlamydia and other pathogens are available. Modern diagnostics and therapy are offered by private clinics. In some newly edited Russian-language textbooks and reviews, antibiotic therapy of Gn is discussed, while the provocations and topical therapy are not mentioned at all. According to the last recommendations by the Russian Society of Dermatovenerologists and Cosmetologists, the provocations for diagnostic purposes are not indicated. About topical therapy i.e. instillations of antimicrobial solutions into the urethra it is written that it is “inefficient” (Rakhmatulina 2013; Samtsov and Barbinov 2016).

Apparently, it is a “shot over the target” after the realization of the fact that such therapy is outdated. It seems to be too early to completely discard the topical therapy of Gn. The antimicrobial resistance (AMR) is developing. There are concerns that Gn might become untreatable by antibiotics (Barbee 2014), which would bring the topical therapy back to the agenda. One of the factors contributing to AMR might be the broad use of antibiotics in the cattle feeding, addition of antibiotics to milk and other perishable foodstuff, e.g., water where frozen fish is stored, which occurs in Russia (Malakhova 2012). It has been noticed in this country since the 1990s that non-sterilized (short-life) milk is going rancid rather than sour. Antibiotics in food might cause gastrointestinal dysbiosis and have other adverse effects (Onishchenko et al. 2012), which is outside the scope of this chapter. Irresponsible use of antibiotics beyond their evidence-based medical applications might generally accelerate the acquisition of AMR by diverse microbial populations. The need to update the treatment of the gonococcal infection to respond to the AMR has been pointed out in Recommendations on the management of Gn issued by the WHO (2016).

### **Sexual and reproductive coercion**

Commenting on the Case 2, presented above, the following should be added. It is known that the Soviet ruling sphere, so-called Nomenklatura (Voslensky 1984) actively participated in the economic reforms of the 1990s, having privatized the state property. Some functionaries’ sons have enjoyed far-reaching impunity in the Soviet and post-Soviet society, becoming involved in immoral and illegal activities, sexual coercion, etc. High social positions held by perpetrators or their relatives prevented reporting. The contraceptive sabotage, often by negligence under the impact of alcohol, was not uncommon (Jargin 2021). However, this topic is largely overshadowed today by migrations and inter-ethnic birth rate inequalities (Jargin 2022). As exemplified by Cases 4 and 5, the sexual and reproductive coercion has been used for the purpose of migration, to cement relationships and marriages, to obtain a residence permit and lodging, or to spread a certain genotype often with geopolitical motives. This is a probable cause of increased birthrates immediately after immigration (Anderson 2004). In some parts of the Russian Federation (RF), as well as in other countries, ethnic

minorities tend to become majorities. Within the former SU, the greatest ethnic shifts have been observed in the Caucasus and Central Asia. The emigration of ethnic Russians from these territories began decades ago having accelerated after the dissolution of SU. Conversely, the immigration to Russia from the above-named regions is conspicuous. In societies with the rape myth acceptance, sexual violence is seen as a method of acquiring wives (Renzetti et al. 2012; Russell 1990). The fact that some victims married their rapists was erroneously seen as indication that women enjoy it; in fact, existing accounts demonstrate various degrees of trauma (Russell 1990). In this connection, battered woman syndrome and learned helplessness must be timely recognized (Black et al. 2020; Tolmie et al. 2018).

Temporary and fictive marriages are becoming more widespread within the framework of migrations, being used to obtain lodging and residence permit. Reportedly, ~70% of sexual violence cases in Moscow are committed by migrants from Central Asia; some other ethnic groups are also active in this field. About 75% of rapes in the Moscow province were committed by migrants (Strauning 2019). The necessity of birth control has been obfuscated by conflicting national and global interests, the population growth being regarded as a tool helping to the sovereignty and national defense. Governmental policies aimed at the fertility elevation in Russia potentially disregard reproductive rights of women. For example, extremely popular TV series such as the “Sled” (Trace) and “Slepaia” (The Blind) regularly present unexpected pregnancies both in and out of wedlock as something natural and unavoidable while contraception is hardly ever mentioned. Remarkably, in the Episode 306 of the latter series (shown by TV3 on 10 November 2020) a gynaecologist surreptitiously replaced contraceptive pills by vitamins. This was presented by the filmmakers as a good deed as the husband wanted children but the wife did not. The risks associated with contraceptives and abortions are invented or exaggerated by some literature and mass media. Apparently, the propaganda follows policies aimed at the birth rate elevation. Some church functionaries, endorsing the Ukraine war, engage in moralizing, among others opposing to abortions, sex education and birth control, depicting childbearing as a duty. In the author’s opinion, the reproductive coercion and contraceptive sabotage must be regarded as crime with infliction of bodily harm if an abortion or unwanted pregnancy, sexually transmitted or genetic disease was inflicted. Cases are known when a hereditary disease was concealed from the partner and then acquired by offspring. Reproductive coercion is regarded to be a form of intimate partner violence; it can lead to unintended pregnancy, abortion, poor pregnancy outcomes, STI, psychological trauma and depression (Grace et al. 2020; McGirr et al. 2020; Park et al. 2016; Silverman and Raj 2014). Among potential contributing factors are disrespect for laws and regulations, impunity of some offenses and offenders, habitual display of death and violence on Russian TV trivializing less spectacular phenomena such as domestic violence, sexual and reproductive coercion.

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## **Chapter 14. From the autobiography**

“An individual feels ashamed when some undesirable truth about one’s fundamental character is revealed to the self or others.” Sick, unattractive and elderly people often appear as typical sufferers of shame (Shaughnessy 2018). Besides, the whistle-blowing and denunciation are often regarded as shameful acts. On the contrary, many perpetrators of laws and mores do not experience any shame and come out as winners. This pertains to diverse phenomena: child and elder abuse, sexual and reproductive coercion, various kinds of fraud, scientific misconduct and plagiarism. With regard to the nursing, neglect of duty and maltreatment of patients should be associated with shame. For doctors, this applies to suboptimal prescriptions due to conflicts of interest, let alone invasive procedures without sufficient indications (Chapter 1). Some authors continue publication with self-references to questionable papers disregarding published criticism, in spite of debates at conferences. What can be done to route the emotion of shame in the right direction, so that not victims and whistleblowers but perpetrators would be ashamed? Publications with names and references seem to be the best way. Of note, it is easy to expose a socially unprotected perpetrator; otherwise, different tools can be used to prevent a disclosure: denial of facts and accusation of slander, threats and violence, tricks and provocations, intimidation or bribing, appeals to preserve the honor and reputation of an institution, family, nation.

Since the 1990s I have regularly participated in detection and criticism of scientific misconduct, plagiarism and falsification in science (Jargin 2020). This short autobiography would explain the motives and mechanisms. After entering the Moscow Medical Academy (named the 1<sup>st</sup> Sechenov Medical Institute at that time) in 1973 I had no vacations till 1993 (Fig. 14-1).

<p>АДМИНИСТРАЦИЯ города Полярные Зори с подведомственной территорией <b>АРХИВНЫЙ ОТДЕЛ</b> ул., д. 4, Полярные Зори г., Тел. 770. 4. 00. 00. 00. 00. Л. 1.</p>	<p>Яргину С.В.</p>
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22.07.2013	№
На №	От

**АРХИВНАЯ СПРАВКА**

В архивном фонде Р-27 «Управление строительства» г. Полярные Зори области, в документальных материалах сантехнических работ, имеются сведения о работе **Яргина Сергея Вадимовича, 21.08.1956 г. рождения:**

- 29.12.1979 – принят на временную работу бетонщиком – приказ от 28.12.1979 № 472-к;
- 17.01.1980 – уволен в связи с окончанием временной работы – приказ от 17.01.1980 № 15к;
- 29.06.1983 – принят на временную работу подсобным рабочим 2 разряда со сдельной оплатой труда – приказ от 28.06.1983 № 137-к;
- 14.08.1983 – уволен в связи с окончанием срока временной работы п.2 ст.29 КЗоТ РСФСР – приказ от 12.08.1983 № 178-к;
- 09.07.1984 – принят на временную работу подсобным рабочим 2 разряда – приказ от 09.07.1984 № 159-к;
- 17.08.1984 – уволен в связи с окончанием срока временной работы п.2 ст.29 КЗоТ РСФСР – приказ от 17.08.1984 № 198-к;
- 02.07.1985 – принят на временную работу бетонщиком 3 разряда – приказ от 02.07.1985 № 158-к;
- 13.08.1985 – уволен в связи с окончанием срока временной работы – приказ от 13.08.1985 № 190-к;
- 07.07.1986 – принят на временную работу бетонщиком 3 – приказ от 02.07.1986 № 157-к;
- 14.08.1986 – уволен в связи с окончанием срока временной работы п.2 ст.29 КЗоТ РСФСР – приказ от 14.08.1986 № 190-к;
- 08.10.1986 – принят на временную работу бетонщиком 2 разряда – приказ от 08.10.1986 № 256-к;
- 06.11.1986 – уволен в связи с окончанием срока временной работы п.2 ст.29 КЗоТ РСФСР – приказ от 06.11.1986 № 317-к;
- 08.06.1987 – принят на работу сроком на два месяца бетонщиком 3 разряда – приказ от 08.06.1987 № 274-к;

**Fig. 14-1.** This certificate only from one employer confirms temporary works in construction in the North of Russia (the dates can be seen; the factual working time was longer).

During summers, and sometimes also in other seasons, I worked with student construction brigades (so-called stroyotriads), later also in self-organized teams in construction (Fig. 14-1) and forestry works, altogether 14 times, 1-2 months each time. The motives were, along with some additional income, the physical activity in fresh air as well as tourism: in this way we travelled to remote areas of our country: Norilsk (1978), Kureika (1979), Ust-Ilimsk (1981), Kola Peninsula (1980; 1983-1987) and other remarkable places. In 1984 I participated in concrete works on the foundation for a nuclear reactor. Concrete of special quality with coarse gravel was used; it was poured down to the foundation pit with a rocky floor from mixers and dumpers. Large amounts of concrete (several mixers) were sometimes poured down one after another, so that the compaction could be uneven. Occasionally, concrete leftovers of deviating quality were poured down into the foundation pit. I reported about it per registered letter to

the Construction Management of the Kola Nuclear Power Plant (6) and later also to the Rosatom Corporation (Fig. 14-2).

Генеральному директору государственной корпорация "Росатом"  
Д-ру Лихачеву Алексею Евгеньевичу  
от Яргина Сергея Вадимовича  
Адрес: Москва 115184, Климентовский пер. д. 6 кв. 82  
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29.03.2017



Глубокоуважаемый Алексей Евгеньевич!

С 1979 по 1987 гг. я неоднократно работал в составе групп временных рабочих в УМиСТРе при управлении строительства Кольской АЭС (КАЭС), см. приложение 1. Примерно в половине случаев старшим (бригадиром) был Готлиб Дмитрий Иосифович 1954 г.р. (Д). Насколько я помню, в последний день нашей работы по бетонированию опоры под 4-й энергоблок КАЭС в 1984 году, будучи старшим в нашей группе рабочих, Д принял в опору бетон «на семечках», обычно используемый для устройства тротуаров. Возможно, миксер был неполным. Об этом факте было сообщено в Управление строительства КАЭС письмом от 15.07.2007 (копии посланы Калошину и Селиванову), а позже в Росатом. Местонахождение Д неизвестно, о его роли я вспомнил позже. Другие рабочие: Джанашвили Тимур Шавлович (местонахождение неизвестно, возможно – США) и Селиванов Михаил Вячеславович (умер в 2015 г.). Бригадиром был Калошин Андрей Константинович, который работал в городе Полярные Зори и в бетонировании опоры не участвовал. Насколько я помню, он осудил действия Готлиба по приему бетона.

**Fig. 14-2.** Part of a letter to the Rosatom Corporation reporting inadequate quality of concrete used for the foundation of a reactor.

Before that, I participated in trekking and canoeing: three journeys two months each - to the Altai Mountains, North Urals and East Siberia (1970-1972). The most remarkable was the last trip in the Transbaikalian taiga, where we saw bears and other wild animals. Trekking and canoeing are excellent vacation activities for people having sedentary way of life, although in some cases it took much time and interfered with professional activities.

In 1974, after a two months work with a construction brigade, I went to Sochi (a Black Sea resort in the South of Russia), where I was plundered and remained without money, which was sent me after a delay despite telephone calls and telegrams. As a result, I came to the lectures two weeks behind the schedule, which eventually resulted in a dismissal. There was a deceit on the part of the dean's office: in fact, the official decision about my dismissal was made several months later in the end of the semester, when I had already given up attending lectures. In 1975, prior to the army service, I worked as a truck driver transporting foodstuffs from a factory to shops. First month I worked together with an experienced driver, who showed me how to make the "weeding": cartons of milk, cream etc. were taken from bottom rows; besides, small amounts of products were stolen at the factory in the process of loading. It did not bring much money: some other drivers purloined products in larger amounts. Trucks were sometimes used by drivers for additional earnings. The theft at workplaces and use of equipment for private purposes was widespread during the Soviet time; the management knew about it. Along with drunkenness, it created a favorable atmosphere for the privatization of state enterprises by former administration and party functionaries. Workers and intelligentsia did not oppose the privatization of factories and other state property during the early 1990s because of their drunkenness and involvement in illegal activities: theft at workplaces and use of the equipment for private purposes.

In medicine, partly due to low wages, different kinds of bribe or unofficial payments became widespread. Medicinal alcohol was regularly purloined from laboratories (in the past tense

because there seems to be an improvement tendency). Many laboratories prepared specimens, using employer's consumables and equipment, against payment, for postgraduate students coming from different regions to acquire academic degrees. In the course of the economical reforms of 1990s, corrupt interactions with pharmaceutical, construction and other firms have become widespread. Certain administrators, accepting bribes in different forms including overseas voyages with family members (Oleg Zairatians), approved of economically suboptimal acquisitions of comparatively expensive equipment. Furthermore, the following case is worth mentioning. In 1996-1998 the Russian Ministry of Health recruited doctors for a temporary practice in Zimbabwe. The campaign was led by a manager of the Ministry by the name Vladimir, who visibly welcomed bribes. Among the applicants was Dr. Tatiana N. Hansen (Ganzen in Russian spelling). The applicants had to make, for their own costs, certified translations of their diplomas and other documents at a translation bureau situated immediately in front of the Health Ministry. Thereafter was silence. Later on, the information about applicants leaked from the Ministry and became known at the Sechenov Moscow Medical Academy, where Dr. Hansen had been employed, and from where she was dismissed around 2002. Dr. Hansen was one of the best experts in biopsy and a good lecturer. Her dismissal hurt the quality of biopsy reporting and teaching at the Academy.

The army service (1975-1977), where I was a truck driver, should be commented briefly. Today, our society is informed about non-statutory relationships (so-called *dedovshina* – “grandfather-stuff”): hazing and exploiting of younger, newly called up soldiers. In my opinion, the non-statutory relationships interfere with the quality of training. Among other things, valuable food such as butter, meat and white bread was taken from the younger. The skeleton continues growing at the age of 18-19 years; and if somebody must be undernourished in a modern army, it should be the “grandfathers” in the first place. I hope that it has changed since then. Beating of soldiers by officers was unusual; I recollect only 2 cases; the perpetrator in both cases was Georgii Turkov. After the demob, I reported about it to the Defense Ministry.

After the army service I worked at a teaching mortuary of the department of normal anatomy. The teaching mortuary means that the corpses were not fresh but fixed in formalin. The exposure to formalin vapors was considerable. We had no extra earnings like the autopsy helpers (so-called *sanitars*) of hospital mortuaries from relatives of the deceased for preparation of cadavers to funerals (washing, shaving, dressing). During the Soviet time these earnings were formally illegal; today the autopsy helpers are employed part-time at funeral firms, their incomes thus being formally legal. This part-time activity, which brings them more money than the hospital's salary, often interferes with their main duties: the assistance at autopsies and at the grossing (cutting-up) of surgical material (details are in Chapter 11).

During the second year of the medical education (1978-1979), I worked part-time as an attendant at a psychiatric hospital. Some patients were alcoholics after an episode of delirium. Other nurses brought them alcohol sometimes. It was within the attendants' duties to clean the floor and the lavatory, but they never did it. The patients did cleaning themselves; usually attendants brought them a pack of tea for that. Patients drank very strong black tea, named *chifir* (<http://en.wikipedia.org/wiki/Chifir%27>), rich in caffeine, as a minor drug or stimulant; it has been widespread in psychiatric and penal institutions. To the best of my knowledge, adverse reactions to *chifir* have never been reported. There were no electric sockets; the patients cooked *chifir* with a cooker in the lavatory, where they stripped cables of a ventilator. After that, they sat in the lavatory, smoked cigarettes and talked. The smoking was permitted only in the toilet room, which was quite dirty. It was known that some attendants beat patients. I saw it only once because we were usually alone on duty. Once I hit a patient

myself: he behaved obtrusively, and I was on duty alone. Certainly, it was a professional misconduct that I sincerely regret today: personnel must have instructions how to act in certain circumstances. We had no instructions at all (Jargin 2015).

During the 1980/1981 academic year I worked part-time as a nurse in an intensive care unit. Untrained students were employed because of the shortage of educated nurses. Being alone on duty, it was technically difficult to do all prescriptions. I did not do all prescriptions, tried to omit what I considered less important, such as vitamins. There were cases of alcohol consumption by nurses on duty, but I did not participate. Parties were frequent also among laboratory technicians, noticed to be accompanied by confusion of specimens. It should be mentioned that I myself would never come to the idea to work at an intensive care unit without any training as a nurse. I even had no mandatory nursing practice after the third academic year because the participation at a construction brigade (stroyotriad) was accepted as a substitute. The employment at the intensive care unit was arranged by the second husband of my mother through his acquaintances, exploiting ambitions of the youngster who had difficulties with saying “No”.

During the years 1983-1989, I was a postgraduate student and beginning lecturer of pathology. In the former Soviet Union (SU), students were compulsorily sent to collective farms to harvest potatoes and other vegetables. At the Sechenov Medical Academy, it usually happened at the third year of education, during the semester time, so that many topics in pathology, surgery and internal medicine were lost. In 1984, the agricultural works lasted more than 2 months. Students were accompanied by younger lecturers. There were parties almost every day; students and lecturers spending time more or less separately. However, cases of indirect use of authority or professor's image to manipulate female students to sexual contacts were known. The second time I participated at the agricultural works in 1986 during the anti-alcohol campaign. It was difficult to obtain alcoholic beverages. In the medical chest we had some stock of alcohol, including solutions of camphor and boric acid. The lecturers (30-45 years old) consumed it all at an early date. After the above introduction follow several autobiographical essays. The narrative is in the third person about Sergei (S.), who was born in 1956.

### **Report of a whistleblower**

Since 1998 S. has regularly participated in the criticism of scientific misconduct and fraud in the former SU. This autobiographical text was written to explain for some motives and mechanisms. In summer 1970, S. travelled with his father in the Altai Mountains. The area was scarcely populated; they met only a few local inhabitants and trekker groups. One lecturer was with them, an alcoholic, who accepted alcohol as a “payment” for the passing of tests. Such behavior was rather unusual; business was concentrated around entrance examinations, mainly in the form of tutoring; although the bribery was known to occur as well, especially in certain regions. In the late 1980s, unofficially paid lessons became widespread also during studies at universities. Students had sometimes no other choice as to take paid lessons because answers to some questions could not be found in textbooks or lectures.

In summer 1971 they travelled in the northern Urals, where some rivers are good for canoe-type boats. A drawback of paddling is that one sees only riverbanks. This was compensated in 1972 during a journey to Siberia, to the East of the Lake Baikal. First, they travelled by steamer along the whole length of the lake. The steamer circulated once a fortnight; there were many passengers. The steamer stopped near coastal villages. It should be commented that in the shops of Siberian villages in that area only two beverages were available: vodka

and 95% alcohol, both of poor quality, apparently produced from sawdust by hydrolysis. The steamer brought Portwein, a fortified (18-19% of alcohol) Port imitation in 750-800 ml bottles. Imitations of wines and spirits of many foreign denominations have been produced in the former SU. The steamer dropped anchor near the coast; and the villagers approached in their motor boats. The bottles were thrown from the deck down to the boats where the villagers caught them. One bottle hit a man's head, probably on a tangent; otherwise he would have been killed by the heavy "fire-extinguisher", as those big bottles with red fluid were named. Near Nizhneangarsk the steamer got into a storm; many people on the deck were sick, not only because of the rocking, but also in consequence of the alcohol consumption. To move on the deck, one had to hold by the railing because the surface was covered by puddles of vomit.

During summers and other holidays, S. was ten times in construction brigades, four times on forestry works and twice on agricultural works with students (1-2 months each time, sometimes twice a year). In Siberia, their job was pine-tree tapping: cutting trees with a hack (hapchot) and collecting soft resin, which is then used for turpentine and rosin production. The hack consisted of two cutters on a stock and a pneumo-hydraulic system driven by a bicycle pump. Its purpose was delivering on the cut surface of a fluid called "barda", a distillery waste supposed to stimulate the resin discharge. Contrary to instructions, workers mixed the barda with concentrated solution of caustic soda, the latter being also used pure, to corrode the cut surface and enhance the output of soft resin. It was said that as a result of this practice, the forest perished after several years of tapping (Jargin 2017). The trees were then cut for timber, rotted on stand or burnt down. Apart from mosquitoes, the pine-tree tapping is a healthy and pleasant job. Inhabitants of the forest dwellings did seasonal works; some of them hunted. They bought vodka during working seasons as some money was earned. Besides, fermented wash with sugar and yeast named braga was consumed or distilled to moonshine (in Russian named samogon). Braga is milky-white and tastes not too bad. Many inhabitants had no documents; some of them were former prisoners. In Siberia, there have been many homeless people named "Beach". It is said that this word derived from English (hence the spelling) and originally meant a sailor finding no employment because of the drunkenness or another reason; I don't know whether it is true or not. The alcohol consumption was widespread among Beaches; during the anti-alcohol campaign, many of them consumed alcohol-containing perfumery and industrial fluids, e.g. window-cleaner. Considering the large scale of the window cleaner sales in certain areas of Siberia, it was knowingly tolerated by the authorities and local rulers. In larger Siberian cities such as Krasnoyarsk homeless people could be seen in the streets in winter. Society should take better care of them.

### **Assault and battery**

S. was beaten several times (Fig. 14-3), in some cases in connection with his criticism of scientific misconduct. S. studied at the medical school diligently, and graduated with honors. He often helped other students, prompted and advised, especially one of them, Vladimir Kuptsov (V.), because only they two were after a two-year army service. Once S. transported the latter's belongings by his small car. S. acted in his interests at the students' dormitory, where V. shared a room with a privileged student from Africa, named Toi. V. occupied about 20 % of the room without window (the rest was occupied by Toi and his female partner). In 1982 S. was invited to a party with a plenty of alcohol. At the party, there was a verbal conflict, which apparently had been provoked. After the party V., who was more muscular, delivered to the severely drunk fellow-student two series of blows to the area of his left kidney in the presence of and apparently in complicity with a female student. It should be



commented that drinking parties were frequently organized in the students' milieu; S. often participated but sometimes evaded under the invented pretext of renal disease. Many years later S. criticized one professor, a former Party functionary, who among others used wedge renal biopsies (6-10 mm), taken during kidney-preserving operations e.g. lithotomy from patients with acute or chronic pyelonephritis, for research of doubtful quality (commented in Chapter 2). In a conversation, the professor mentioned V. and the above-mentioned female student with a threatening intonation. A probable explanation is as follows. S. often made anti-Soviet remarks especially during drinking parties. The assault and battery could have been organized by the Party or Komsomol activists. Violence and hidden threats were used to control and intimidate certain students including potential dissidents (one of the perpetrators – Yuri Grashchenko). Besides, Grashchenko and Kuptsov regularly manipulated other students to excessive alcohol consumption.

Treatment of gonorrhoea is discussed in Chapter 13 with three typical cases from the 1970-1980s. The Case 2 is further commented here. A son of a higher officer commissioned himself with a next military rank every time he was infected with gonorrhoea. In this way he became a generalissimo, which illustrates the widespread irresponsibility: the patient was in fact proud of his "career". He was one of the ringleaders of a drinking company that, apart from the black-market trade etc., inveigled adolescents into alcohol consumption and young girls into sexual contacts e.g. with foreign truck drivers and participants of international exhibitions in Moscow. The patient never approached the dermato-venereological dispensary (prevention and treatment center) and treated himself with intramuscular injections of Bicillin (Benzathin-Benzylpenicillin). Retrospectively it is unclear when it was a new infection or exacerbation: the case was reported to the authorities after many years of the patient's activities. S. did not conceal the fact of denunciation and was battered at a later date. The offspring of higher functionaries is a known problem; their right to violate mores and laws is accepted by a part of the society. Coming back to gonorrhoea, the groups of risk were informed about the outdated and unpleasant methods of topical treatment applied in the governmental dispensaries, and avoided them. They treated themselves with antibiotics not always adequately, thus continuing to spread the infection. This case demonstrates that the society factually permitted the spreading of sexually transmitted diseases, also by people from higher social classes.

Finally, a vertebral injury should be mentioned. S. has a marfanoid body structure with a thin skeleton and lax joints; however, thanks to some sports and - from 1977 to 1988 - construction and forestry work during holidays, he was in a rather good form. In 1986 the construction job was helping to finish a stadium in a city north of Saint Petersburg. Temporary workers were employed because of the short construction period, for which the regular staff did not suffice. They worked on average 16 hours a day without holidays making concrete and other works. When the task was nearly finished, a new watchman appeared on the scene: a young lady with a technical education and little child. She came to work at an industrial complex, but somebody did not keep his promise, and she had to take a temporary job of night watchman at the stadium. The child stayed at home in another town. 'Come for a cup of tea after work,' she suggested while S. was digging in a trench. In the manual labor, as in some other things, S. overestimated himself; the vertebral column sent feedback through afferent channels: he should not carry heavy weights. But the work had to be finished - and she was waiting in the evenings. The barrow became heavier, and the pain in the spine was getting worse. The spine started to hurt again, 12 years later, in the cervical area, when S. practiced abroad as pathologist and started to go on long-distance bicycle trips to counteract the sedentary lifestyle. At first, it was difficult to turn the head changing traffic lanes; the pain



later became almost permanent, forcing him to get off the bicycle and walk. The conclusion after radiography: old compressive fracture of the C6 vertebral body. S. had to avoid any load on the shoulder girdle... He has also hiatal and inguinal hernias. The barrow was overloaded by the team-leader (Dmitrii Gotlib). S. had visibly thin skeleton; the barrow was too heavy for him. As mentioned above, he had difficulties with saying 'No'; and surrounding persons knew that. The motives are not entirely clear. It has become clear years later that some friends, boon companions and female partners reported on his anti-Soviet views, remarks etc. Threats and provocations continue until today...

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г. Москва, ул. Павловская, 25  
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Права на освобождение от работы не дает.

СПРАВКА А 4016

Ф.И.О. Ирмен С.В.

Обратился (ась) 03.08.2003 в 20 час. 20 мин.

Диагноз: Ушиб лопатки  
меж лопатки

оказанная помощь \_\_\_\_\_

Направлен \_\_\_\_\_

Рекомендовано \_\_\_\_\_

Противостолбнячная иммунизация: АС-анатоксин - \_\_\_\_\_ серия \_\_\_\_\_

Аллергологическая проба \_\_\_\_\_ (+ -),  
ПСС \_\_\_\_\_ ед. По Безредко \_\_\_\_\_

Ввести АС-анатоксин 0.5 « \_\_\_\_\_ » \_\_\_\_\_ 200 г.

03 08 2003 врач Р.Т.О. Ирмен С.В.

ТРАВМАТОЛОГИЧЕСКОЕ ОТДЕЛЕНИЕ  
ГОРОДСКОЙ КЛИНИЧЕСКОЙ  
РАЙОННОЙ БОЛЬНИЦЫ №4  
113093, г. Москва, ул. Павловская, 25  
тел. 955-65-81

Права на освобождение от работы не дает.

СПРАВКА А 2419

Ф.И.О. Ирмен С.В.

Обратился (ась) 13.08.2003 в 9 час. 40 мин.

Диагноз: Перелом лопатки  
Ушиб лопатки. Состр. вол. мозга?

Оказанная помощь: Пункция сустава, К.У.  
лечеб. ЛОР

Направлен по ул. Амет.

Рекомендовано лечеб. ЛОР и невролог

Противостолбнячная иммунизация: Анатоксин 0,5 сер. \_\_\_\_\_

Аллерг. проба \_\_\_\_\_ (+ -)  
ПСС \_\_\_\_\_ ед. По Безредко.  
Ввести Анатоксин 0,5 « \_\_\_\_\_ » \_\_\_\_\_ 20 г.

13 08 2003 г. Врач Р.Т.О. Ирмен С.В.

ТРАВМОЛОГИЧЕСКИЙ ПУНКТ  
ГОРОДСКОЙ КЛИНИЧЕСКОЙ  
БОЛЬНИЦЫ № 4  
г. Москва, ул. Павловская, 25  
тел. 955-65-81

Права на освобождение от работы не дает

СПРАВКА А 1038

ФИО Ярин С. В.  
Обратился (ась) 14.11 200 7 г. в 0 час. 05 мин  
Диагноз множественное ушибов и/или  
миза, ушиб лодыжки и/или  
Оказанная помощь мной наховай области

Направлен \_\_\_\_\_

Ркомендовано \_\_\_\_\_

Противостолбнячная иммунизация: Анатоксин 0,5 сер. \_\_\_\_\_

Подклиническое отделение  
городской клинической больницы № 4  
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тел. 954-98-18

Аллерг. проба \_\_\_\_\_ (+ -)

ПСС \_\_\_\_\_ ед. По Безредко.

Ввести Анатоксин 0,5 « \_\_\_\_\_ » 200 \_\_\_\_\_ г.

«14» 2007 г. Врач Р.Т.О. Ярин

Городская поликлиника №66  
Центрального административного округа  
г. Москвы  
ТРАВМОЛОГИЧЕСКИЙ  
ПУНКТ

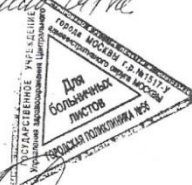
в ООО, Клиновники

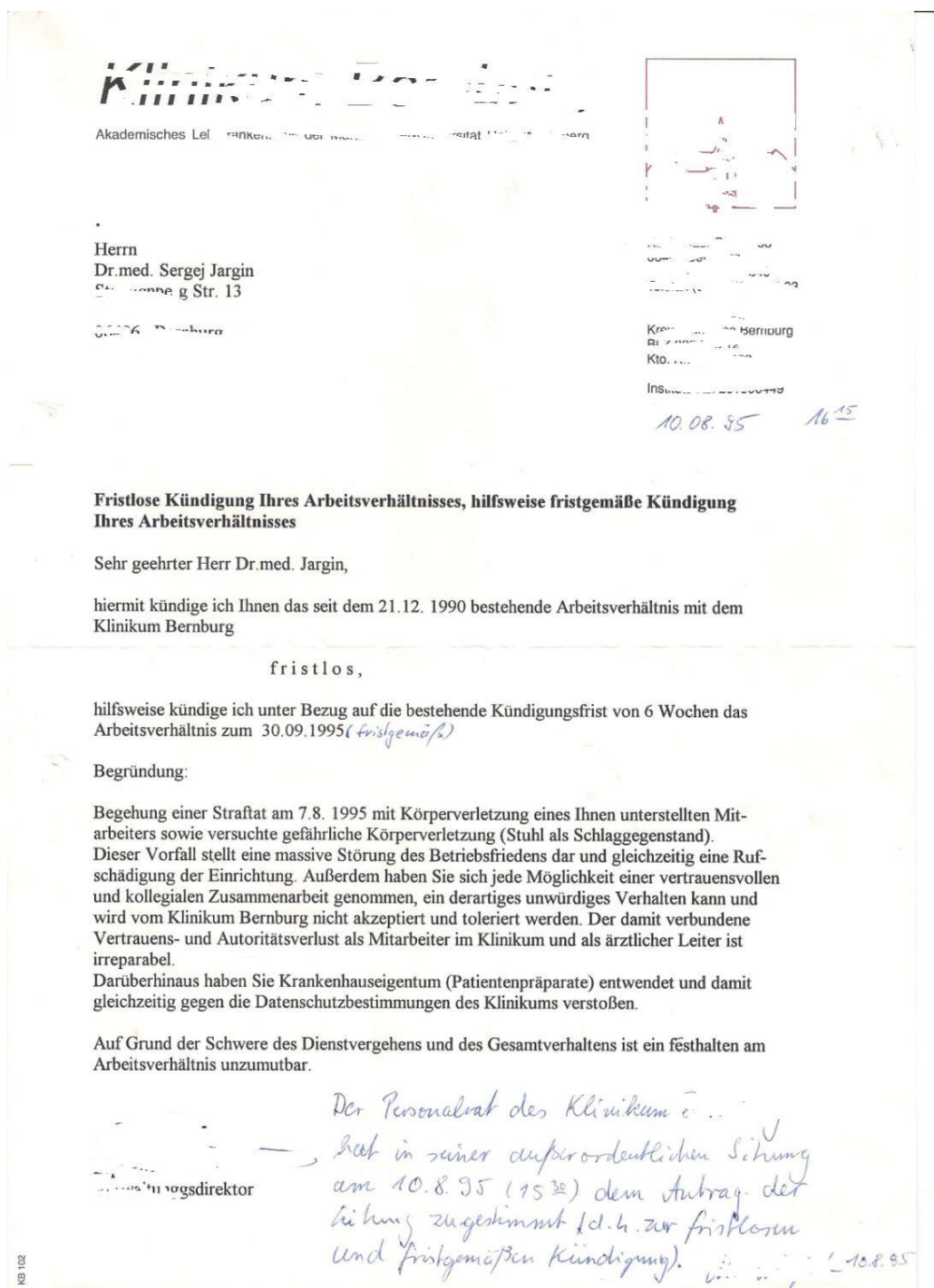
Ярин С.В.

Д/у Клим. Свирова  
м.б. и/или  
ушибов. Ушиб м/т  
миза.

7  
17/12/03

В.Р.





**Fig. 14-3.** Documents confirming injuries from assault and battery. Some of them are copies because originals were submitted to the authorities.

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## **Chapter 15. The Ukraine conflict**

The declared reason of the “special military operation” (SMO), which began in February 2022, was the anti-separatist activity of Ukraine in the Donbas since 2014. Apparently, this activity was exaggerated by the media. Combating separatism within national borders is justifiable, exemplified by Russian anti-separatist operations in the North Caucasus (1994-2009). The Ukraine voted for independence (~83%) in the 1991 referendum. The pro-independence vote varied from 95% in the west of the country to 76.5 % in the Donetsk area and 54% in Crimea (Sneider 1993). The 1991 borders of Ukraine were recognized by all nations, including the Russian Federation (RF), which consented to guarantee the borders by virtue of the Tripartite Accords (with participation of the United States) of January 14, 1994, and the Budapest Declaration of December 5, 1994. On May 31, 1997, the Treaty on Cooperation and Partnership between Russia and Ukraine was signed, recognizing the state borders. The State Duma endorsed the Treaty in December 1998, and the Federation Council in February 1999 (Trenin 2001). The United Nations considers SMO to be a violation of territorial integrity and sovereignty, which is against the UN Charter. In any case, territorial claims must have been declared before resorting to war. The Ukraine war, having undermined the principle of internationally agreed status quo, has triggered a series of conflicts in different parts of the world. The Russian military establishment earns credibility and funding by exploiting supposed threats from the West (Buwalda et al. 2003).

Admittedly, a majority of residents in the southern and eastern parts of Ukraine are Russian-speaking and many people were disappointed that their region had not become a part of RF. Statistics about ethnic composition of Ukraine are potentially misleading because some residents registered themselves as Ukrainians for reasons of convenience but continued sharing the Russian identity. Recent referendums in occupied territories were met with scepticism, as the residents voted for the unification with RF to avoid trouble because they did not believe that the situation will be reverted. The Soviet-trained collectivism has influenced referendums, elections and opinion polls. Almost everybody voted the ruling party in the former SU. Some Russian-speaking provinces of Ukraine may become parts of RF if people really want it. The border should be agreed by negotiations. We hope that the Russo-Ukrainian border, like other inner-European borders, will lose significance one day, when Russia will become a part of unified Europe, the latter being extended to the Pacific Ocean.

### **Religion-related aspects**

The anti-religious propaganda in the former Soviet Union (SU) was efficient. Atheism was easily accepted after 1917 not only due to the propaganda, but also because faith had been not as deeply ingrained in Russia as it is sometimes believed. Faithful people belonged predominantly to the middle class that was largely destroyed by Bolsheviks. The campaign of eradication of illiteracy in rural areas (known as Likbez), started in 1919, was atheistic. Soviet propaganda claimed great successes in tearing people away from religion (Pospelovsky 1987). In Ukraine, particularly in the western regions, which belonged to Poland and escaped the anti-religious activities of the 1920-1930s, the situation was different. Even in the Soviet part of Ukraine, Bolsheviks were alarmed by religious renaissance in the late 1920s. Closing and demolition of churches, persecution of clergy and parish activists were implemented (Freeze 2012). Then followed the famine (1932-1933) partly caused by Bolshevik policies. During the German governance (1941-1944), churches in Ukraine were full, church weddings and baptism being usual practices (Buss 1987). The anti-religious campaign by Nikita Khrushchev met obstacles in Ukraine (Yelensky 2012).

In 1989, approximately 75% of the population declared themselves atheistic; only 20% called themselves Orthodox (Trenin 2012). Later on, surveys reported higher percentages of self-identification with Orthodox Christianity; but the knowledge of Scriptures remains at a low level (Andreeva and Andreeva 2010). Many people understand only a small part of the liturgy, due to it being in Church Slavonic. Probably for that reason people are more affected by rituals and traditions than by preaching and Bible study (Ramet 1993). The somewhat archaic language of the most widespread Synodal translation of the Bible (19th century) is not easily understandable in places. The English Standard Version is more comprehensible. The modern translation by the Bible Society in Russia is not uniformly accepted because many people are accustomed to the older version. The optimal solution would be a distribution of bilingual Bibles. Standing upright at lengthy services is a health risk; it is contraindicated, especially for aged people. In other countries, churchgoers are seated with a text in front of them, understanding everything that is said and chanted.

If a child goes to church, he or she may become believing and carry faith through the whole life despite scientific education. The appearance of religious beliefs from within in an atheist is improbable, being formally compatible with a delusion. However, the prevailing psychiatric view is that religious beliefs are not delusional if they are culturally accepted. The acquisition of faith by an adult is conceivable for holy fools (Hunt and Kobets 2011), who tend to become more numerous when the Church makes compromises with secular authorities (Sychev 2019). A blessed idiot is simple at his judgments, interpreting Biblical passages literally (Bodin 2009); he might consider proclaiming anathema to the atheists wearing *koukoulions* to cover the fratricide. The author believes that the recent religious revival in Russia is partly insincere and superficial, being a matter of fashion and lately also of official policy. Apparently, a majority of today's churchgoers, priests and church officials in Russia are atheists or agnostics, habitually following prescribed ideologies. This pertains also to the Patriarch of Moscow Kirill, who approves of the Ukraine invasion, demonstrating no willingness to seek peace and painting the warfare as an apocalyptic battle against "evil forces" (Netburn 2022). In fact, this is a continuation of the anti-European and anti-American (read: anti-Christian) policy of the Soviets. Preparing the end of communist regime, the party and military functionaries, so-called *Nomenklatura* (Voslensky 1984), sent their children to theological academies, some students being transferred directly from Marxism-Leninism faculties. According to an estimate, ~60% today's elites in RF have *Nomenklatura* backgrounds (Snegovaya and Petrov 2022). Also in Ukraine the "oligarchic-nomenklatura holdover" prevailed in politics and economics (Bennich-Björkman 2022); although it might be changing these days. For inside observers it is obvious in retrospect that *Nomenklatura* prepared the end of the communist regime since the 1980s in order to privatize the state property into their own pockets, which was in fact accomplished in the early 1990s.

### **Psychological aspect**

The question has been raised whether a doctor may speculate about mental conditions of public figures he or she has not personally examined. Apparently, the need to warn the public overrides the duty of confidentiality (Gartner et al. 2018). The psychopathological approach to politics is successful if it identifies politicians with impaired mental competence (Pettman 2012). If a leader is psychotic while other functions are more or less intact, he can preserve abilities to remain in the position of power (Lavik 2002). This is precarious in authoritarian regimes with inefficient democratic procedures. Several Soviet leaders had mental abnormalities (Förstl 2020). Paranoia was deployed both in authorities and in the whole society (Soloway and Bogatikova 2015). Delusions are virulent; certain peoples can subscribe to delusions at large. It is possible for a majority to be deluded and minority not to be deluded

(Braithwaite 2017). Mentally healthy people can be susceptible to psychotic appeals, a predisposing condition being fear of strangers and projection of hatred upon them. Paranoid politicians search new enemies and reanimate old hatreds; this is what we are observing today. The more different is a stranger, the more convenient is he or she as a target for externalization. A suitable enemy is a reservoir for all negated aspects of the self (Robins and Post 1997). Furthermore, increased exposure to crime can lead to paranoid thoughts (Jack and Egan 2016). The intimidation policy with exaggeration of crime-related dangers is perceptible from Russian media since the last decades. In conditions of the Soviet-trained collectivism and mass intimidation almost everybody voted the ruling party. This is psychologically explicable; but the uniform voting makes the whole nation co-responsible. Homogeneity of thinking is a predictor of conformism that is conducive to dictatorship (Marazziti 2022). Trenin (2006) made sweeping generalizations about related features of the “national character”: deification of the state authority, low value of human life and personality, insufficient respect for laws, private property, education and work compared to leisure. Hatred and envy of America were mentioned as well. Indeed, envy may contribute to hostility. Envious people blame those who make them feel ashamed by comparison (Kilborne 2021).

Grave consequences occur when paranoid ideas persist in a dictator along with rationality and efficiency, so that delusions are put into life (Lavik 2002). Delusions are false beliefs held in the presence of contradictory evidence. A paranoid call may sanction a destruction of supposed enemies (Robins and Post 1997). A belief that others intend harm contributes to aggressive behaviors. Some paranoiacs are belligerent and aggressive against delusional goals. Governments in democracy are more transparent; so it is less probable that power would be kept or influenced by a mentally disordered individual. Vladimir Putin’s saying “If a fight is (perceived as) inevitable, you must strike first” may be a trace of juvenile ways of defending against bullies, presumably related to an intergenerational traumatic chain (Ihanus 2022). According to some analyses, the prevalence of family violence in RF during last decades has been 45-70 times higher than, for example, in the United Kingdom and France; details and references are in Chapter 11. Physical abuse was described in biographies of Vladimir Putin (Ihanus 2022; Baker and Glasser 2005; Ressler 2017; Volkan and Javakhishvili 2022). There is evidence of association between childhood trauma with various mental derangements, including persecutory delusions (Lopes 2013; Ross et al. 1994). Reportedly, the worse a child is treated, especially by his father, the more frequent is paranoid ideation observed in the adult life (Carvalho et al. 2018). Apparently, Putin is sensitive to hints of bullying and fears its re-enactments. Aggression may be a way to defend self-esteem, blaming others in order to maintain a positive self (Lopes 2013; Bentall et al. 1994). Apparently, it is not Russia that is threatened but rather the adolescent is “re-enacting his family’s trauma” on the political scene (Ihanus 2022). In regard to the ongoing demolition of the Ukrainian infrastructure, Putin may be in grip of the idea that the denazification can be achieved through extensive devastation; otherwise “the Phoenix could rise from the ashes” (Beisel 2022). There is an opinion that Putin’s phantasm of Ukraine’s denazification is an *idée fixe* based on entangled memories of what he has heard about the World War II. Presumably, Putin wants to resist the imagined attack from the West; in the process, he strives to become a new Stalin by completing the latter’s unfinished task of conquering Europe (Beisel 2022; Volkan and Javakhishvili 2022).

Paranoid rulers tend to promote mentally abnormal individuals and rely on their opinions (Zoja 2011). An example is the “eurasianist” ideologist Aleksandr Dugin, called the “Putin’s brain” (Rutland 2016), who preaches Russia’s westward expansion often resorting to religious and mystic vocabulary. Here follow several citations from his works (verbatim translations):



“To close down America is our sacred duty” (Dugin 2005); “Anti-Americanism is a Creed. The prohibition of war propaganda is pharisaic. You can’t get away from the war and you shouldn’t try (Dugin 2004)”; “Only a traitor would wish peace today” (Dugin 2023); “We must forget about the nightmare that is called political correctness, liberalism and human rights. We must forget this terrible nonsense” (Dugin 2007). His writings are indicative of grandiose and persecutory delusions, for example: “If we lose, we will blow up the whole world” and “Americans cause rejection, repulsion, a desire to hide from their influence” (Dugin 2015). Dugin’s delusion-like or overvalued ideas include the “Western plot to undermine Russia” and “Eternal struggle between Land and Sea” (Livers 2020), the latter probably being a reminiscence of the novel 1984 by George Orwell. Some more citations: “The will of any people is sacred. But the will of Russian people is hundred times more sacred” (Dugin 1994); “For peace to be without war, the war is first necessary. We make the war. It originates in our heart. We give birth to the war. Through the war we create the world, our Russkiy Mir” (Dugin 2015). Considering the above and other Dugin’s discourses, some analysts consider him to be a madman, albeit a widely read and influential one (Benedetti 2004). Of note, Alexandr Dugin was born into a family of a Soviet colonel-general (Boyko and Senchin 2007). The former party and military functionaries (so-called Numenklatura) promoted their children sometimes irrespective of the latter’s abilities and health condition (Voslensky 1984).

### **The role of non-Christian confessions**

Defensive behaviors may include attacking weaker persons and submitting to dominant ones (Lopes 2013). The latter seems to be reflected by relationships of Vladimir Putin with Ramzan Kadyrov, the head of Chechen Republic, who is a dominant personality. There has been a stereotype of chechenophobia in Russia (Khlebnikov 2003). Reportedly, Putin studies Sufism and is sympathetic to this Islamic teaching (Mukhin 2015). The above-mentioned Alexandr Dugin worked on interpretations and conceptualizations of Sufism (Knysh 2022). Some people would rather fraternize with non-Europeans and obey them, as it was during the Stalin’s rule, or in the 1990s, when Chechens held leading positions among organized criminals (Khlebnikov 2003), rather than build constructive relations with Western nations. The most important topic in this connection is the inter-ethnic difference in birth rate and migrations, which is avoided by Russian media and officials today. In November 2022, Putin awarded the Soviet-era medal for “mother heroines” to Kadyrov’s wife, who has fourteen children. According to the Wikipedia, Kadyrov has three wives. There is a continuous migration of Chechens from mountainous to plain areas to the North of the Caucasian Mountains as well as to other parts of RF. Chechnya receives considerable federal funding.

Ramzan Kadyrov declared the war in Ukraine “Big Jihad” and urged Russian Muslims to fight the satanic democracy and demons. Furthermore, he urged his supporters to lay waste to Ukraine and backed calls to wipe cities off the face of the Earth. Kadyrov also vowed that anyone who agreed to take up arms and fight would get to kill shaitans, which is an Islamic term for demons: “We will not capture those shaitans, but we will burn them” (Stewart 2022). The Quran contains numerous injunctions regarding unbelievers: “Smite at their neck at lengths; when ye have thoroughly subdued them, bind a bond firmly on them” (47:4). It is not permitted to a Muslim to kill another Muslim (2:84; 4:92), but with regard to unbelievers other recommendations are given: “Fight them on until there prevails faith in Allah altogether and everywhere” (8:39). About responsibility for murder, it is commented: “It is not ye who slew them, it was Allah” (8:17). Contradictions between the Quran and modern legislation can be found: “The law of equality is prescribed: the free for the free, the slave for the slave, the woman for the woman” (2:178) (Yusuf Ali 1999). It can be understood that, instead of a



criminal, an innocent from his kinship may be killed, woman for the woman, etc. Jihad, the holy war, is considered to be a religious duty. To be objective, positive tendencies in the modern Islamic literature should be pointed out: condemnation of terrorism, promotion of business ethics, of good-neighbor relations, disapproval of arrogant attitude towards supposed sinners and unbelievers. Undoubtedly, Islam promotes many universal moral values.

Calls for punishments can also be found in the Old Testament: “And thine eye shall not pity; but life shall go for life, eye for eye, tooth for tooth, hand for hand, foot for foot” (Deuteronomy 19:21). The words eye and tooth, used allegorically, can be understood differently in various cultures, so that the concept might lead to conflicts. Admittedly, the eye for eye principle can be seen as a limiting of retribution. Confessional differences should not be exaggerated; but throughout history religious teachings and fanaticism have sometimes contributed to wars. Conflicting laws and injunctions cannot be valid at the same time and place. Considering the unpredictability and compromise-resistance of terrorists with religious motives (Cimbala 2013), such motives should be regarded by the criminal justice system as aggravating circumstances. This must pertain also to the appeals for war and violence using religious vocabulary, noting that war propaganda is prohibited by the international law (CCPR 1983).

### **Demographic and environmental perspective**

The overpopulation and gender imbalance are increasingly important these days as potential causes of conflicts. The growing excess of males in consequence of sex-selective abortions may contribute to militarism. The ecological damage, shortages of drinking water and food are generally proportional to the population density. The agricultural production increases partly through overexploitation and pollution of water resources, groundwater depletion, deforestation and environmental degradation. In the last quarter of the 20th century, the population grew faster in less developed countries than in more developed ones; the ratio of greenhouse gas emissions to the population growth being estimated at 2.8 in developing countries vs. 1.6 in developed parts of the world (Cohen 2010). The industrialization of regions formerly regarded as developing is significant because of insufficient environment conservation measures, and above all due to the vast dimensions of the process, proportional to the population size.

The conflict in Ukraine has impeded environmental policies in Europe and elsewhere. The war itself is damaging for the environment. The conflict between two major agricultural countries has negative impact on the global food supply. As food prices rise, some nations are likely to cope by converting forests to fields. International tensions and conflicts are among reasons to boost childbearing in Russia and some other countries. Pro-natalist policies are harmful in view of the global overpopulation. The demographic growth contributes to the shortage of food and energy in many regions. The birth control has been obfuscated by presumed national interests: the demographic growth was used to strengthen the sovereignty and defenses. International conflicts provide motivation for the population growth. In the past, overpopulation was counteracted by wars, pestilence and famine. Today, scientifically based humane methods can be used to regulate the population size. Under conditions of globalization, an authority based in developed countries could counteract the overpopulation and environmental damage. Among advantages of globalization are the ecological management, governance of the world economy, control of warfare and fostering of transnational democracy (Giddens 2002; Ross 2002). A globally coordinated unemployment protection would inhibit migrations and help people to develop professional skills according to new demands (Ghislieri et al. 2018). Of particular importance is the globalization of human

rights including tools and sanctions reinforcing accountability (Kim 2017). Great projects could be accomplished by the unified humankind to improve the quality of life worldwide: irrigation systems, nuclear and other energy sources as an alternative to fossil fuels, hydroelectric power plants on large rivers to produce hydrogen as eco-friendly energy carrier. New substances used in the industry, nutrition and medicine must be tested in large animal populations to achieve statistical significance and register rare outcomes. Such projects would create many jobs, being a reasonable alternative to the warfare and excessive military expenditures. Not much is needed for that: a globalised administration and English as the first or second language for everyone. Moreover, should the birth rate decline in the future, it means that the workforce is at its maximum today, and this is an opportunity to accomplish great projects.

No realistic solutions of the overpopulation-related problems have been proposed so far. Such solutions would require a revision of some ethical clichés and propagation of new principles, in particular, that no population group, on a local or international scale, may obtain any advantages because of its numerical size or growth. On the contrary, those who have had many children should live in more crowded conditions. Social consequences of the gender imbalance must be borne by those population groups, where sex-selective abortions were practiced. Adherence to these principles could build a basis for globalization and mutual trust. Without procreative competition, different peoples would be more likely to live in peace. The most reliable method of birth control is sterilization. The last (or single) birth should be preferably accomplished by a caesarean section. Although more costly, this procedure is associated with a lesser risk for the newborn and facilitates sterilization by resection of fallopian tubes (Jargin 2018b). Vasectomy in men would be also efficient, especially in the populations, where overt or hidden polygamy and contraception sabotage are common (Jargin 2018). Sterilization can provide a solution of controversies related to the economic migrations. If an economy needs foreign manpower, sterilization should become a desirable or obligatory condition for a residence and work permit. Such measures are preferable compared to economical sanctions against families with many children, which, to be efficient, must include denial of free education and medical care for the second or third child. The victims of such measures would be children, who are not responsible for their parents' unwillingness to use contraception (Jargin 2009). It can be argued that sterilization does not prevent sexually transmitted diseases including AIDS; however, these conditions may be regarded as self-inflicted in consequence of negligent or immoral behavior, thus being in a sense a private matter. However, when children appear, it ceases to be a private matter or an inherent human right, as the number of children in a family is of public concern today. There is an objection that birth control and sterilization are unnatural. It should be noted that death from infectious, parasitic diseases and many forms of homicide are natural, while survival in a case of perforated appendicitis or care for disabled are unnatural. In fact, it is the human civilization that is unnatural, and it is the civilization that can prevent overpopulation, environmental damage and international conflicts.

High fertility was propagandized during the global conflicts and the Cold War to replenish military and labor resources. Necessity of birth control has been obfuscated by conflicting national and global interests: population growth has been regarded as a tool helping to sovereignty and economic advance. It is argued that birth rates tend to decrease as living conditions improve. There is such tendency indeed but it is obviously insufficient in some regions of Africa and Asia. For example, Uganda is projected to triple by 2050 to about 103 million inhabitants, which will be accompanied by deforestation and soil erosion (Coombes 2009). The tenfold population increase in Ethiopia during the last century resulted in a

shortage of food supply and unemployment (Nyssen et al. 2009). As for the more developed countries, their population continues growing due to economic, ecological and war-related migrations. Finally, it should be stressed that there can be no religious objections against contraception, sterilization and abortions because these methods are not mentioned in sacred texts. Religious concepts, realized without consideration for realities, may cause geopolitical and demographic problems. Russian leaders must support developed countries in their civilisatory efforts instead of obstructing them as they have done during last 100 years (Fig. 15-1).

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#### **Текст**

Ввиду мировых и российских демографических тенденций надо, наконец, поддерживать цивилизацию.

Прилагаю свою статью в Южноафриканском медицинском журнале 2009 г.

ответ не нужен.

*Отправлено: 15 февраля 2024 года, 04:52*

*Отправленное 15.02.2024 Вами письмо в электронной форме за номером ID=10832941 будет доставлено и с момента поступления в Администрацию Президента Российской Федерации зарегистрировано в течение трех дней.*

АДМИНИСТРАЦИЯ ПРЕЗИДЕНТА  
РОССИЙСКОЙ ФЕДЕРАЦИИ

УПРАВЛЕНИЕ  
ПРЕЗИДЕНТА РОССИЙСКОЙ ФЕДЕРАЦИИ  
ПО РАБОТЕ С ОБРАЩЕНИЯМИ ГРАЖДАН  
И ОРГАНИЗАЦИЙ

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« 15 » февраля 20 24 г.



НО-  
196672

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Ваше сообщение, поступившее на имя Президента Российской Федерации 15.02.2024 г. в форме электронного документа и зарегистрированное 15.02.2024 г. за № НО-196672, рассмотрено.

Информируем, что обращения рассматриваются в соответствии с Федеральным законом от 2 мая 2006 года № 59-ФЗ «О порядке рассмотрения обращений граждан Российской Федерации» (далее – Закон).

В соответствии с пунктом 1 статьи 4 Закона обращением гражданина является направленное в государственный орган, орган местного самоуправления или должностному лицу в письменной форме или в форме электронного документа предложение, заявление или жалоба.

В соответствии с частью 1 статьи 7 Закона в тексте письменного обращения излагается суть предложения, заявления или жалобы. В случае необходимости в подтверждение своих доводов гражданин вправе приложить к письменному обращению необходимые документы и материалы либо их копии (часть 2 статьи 7 Закона). Обращение, поступившее в государственный орган или должностному лицу в форме электронного документа, подлежит рассмотрению в порядке, установленном Законом, к которому гражданин вправе приложить необходимые документы и материалы в электронной форме (часть 3 статьи 7 Закона).

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**Fig. 15-1.** Petition to Vladimir Putin with attachment of the article by Jargin (2009), filed February 15, 2024: “In view of the global and Russian demographic tendencies, it is necessary to support civilization at last”. Bottom - reply from the Presidential administration: “Your petition cannot be considered”.

Birth rate inequalities lead to a growth of certain minorities that may become majorities and cause political instability. Differences in population dynamics between ex-Soviet countries and ethnicities within RF are considerable. The greatest ethnic shifts have been observed in the Caucasus and Central Asia. Emigration of Russians from these regions has started decades ago having accelerated after the dissolution of SU, while the immigration to RF of ethnically non-Russian people is conspicuous. The highest birthrates within RF were registered in Chechnya, Ingushetia and Tuva; the fastest population decrease - in Pskov, Tambov, Tula and Tver provinces (Arkhangelsky 2015). Migration of ethnic Chechens from mountains to lowlands is going on while ethnic Russians are leaving the area (Panin 2018; Riazantsev 2003). According to surveys, most frequent reasons of emigration from the North Caucasus were crime, threats and abuse of children (Gadzhieva 2019). Almost in all Far Eastern provinces of RF, the ethnic Russian population is dwindling. Since the 1990s, immigration to the Far Eastern parts of RF has occurred from the Central Asia, China, North Korea and Vietnam, compensating for departures of ethnic Russians. Same analysts forecasted that by mid-21st century there will be 7-10 million Chinese in Russia (Trenin 1999). The population growth in the Far East has been maximal in Buryatia and Yakutia thanks to higher birth rates

of the indigenous ethnic groups (Simagin and Murtuzalieva 2020). The maximal contribution to the population decline in the period 1992-2019 was made by St. Petersburg (652 thousand people lost) with surrounding oblast (414), Pskov (237), Vologda and Novgorod provinces (185 thousand each) (Rybakovsky and Fadeeva 2020). In Dagestan, the birth rate of indigenous peoples is approximately twice as high as among Russians (Gadzhieva 2019). The birth rate in Moscow is one of the lowest in RF, while the population growth is nearly the highest thanks to the immigration accounting for 83.7% of the growth in the period 2012-2018. One of 7 infants in Moscow is born to a migrant woman coming predominantly from the Caucasus or Central Asia. The phenomenon of “guest” or “parallel” (i.e. temporary or fictive) marriages becomes more widespread (Arkhangelsky et al. 2019a,b). Sexual and reproductive coercion is used for the purpose of migration, to cement relationships and marriages, to obtain a residence permit and lodging, or to spread a certain genotype often with geopolitical motives. More details are in Chapter 13.

## **Discussion and conclusion**

The world is still living off the moral capital invested by Christendom. If it will be used up we shall descend into immorality and ethical confusion (Holloway 2004). Humanism owed great deal to Christian ethics. Religious pro-sociality is conducive to cooperation, also with strangers (Norenzayan, 2014). Outside religion, it is hard to see how the notion what is right and wrong should provide a motive for doing right (Mitchell 1980). According to a widespread opinion, morals have no materialistic foundations worth respecting (Oakeshott 1993; Jargin 2014). A justification for the use of force as a last resort is to provide breathing-space for morals and truths to be established (St John 1985). Should the power in Europe shift to the East, it would come along with losses of some moral values. Disregard for laws and regulations, corruption and collectivism will come instead. The quality of many services and products will decline: spoiled foods on sale, antibiotics in milk, falsified beer and wine, impolite service, wrong price tags in shops, misquoting of legal codes by civil servants in their correspondence, backdating of official letters, embezzlement of registered correspondence, different types of misconduct in the healthcare (Jargin 2020).

The autocratic management style discourages criticism. In the healthcare, attributes of this style include a paternalistic approach to patients, bossy management, and harassment of colleagues if they do not follow instructions. Under conditions of paternalism, misinformation of patients, disregard for the principle of informed consent, and compulsory treatments are deemed permissible (Mikirtichan, et al. 2022). The following is discussed: the overuse of gastrectomy for peptic ulcers, of thoracic surgery in tuberculosis, bronchial asthma and other respiratory diseases, spleno-renal anastomosis for diabetes mellitus, excessive and compulsory treatments of alcoholics. Endocervical ectopies (named pseudo-erosions in Russia) have been routinely cauterized without cytological tests; Pap-smears for early detection of cervical cancer have been performed infrequently and not up to the international standards, cervical cancer being diagnosed relatively late (details and references are in Chapter 1). Millions of women in the former SU underwent Halsted and Patey mastectomy with removal of Pectoralis muscles without evidence-based indications, often without informed consent. Patients with early cancers were subjected to mastectomies including resection of pectoral muscles without discussing with them the extent of operation. Justifications of surgical hyper-radicalism could be heard in private conversations among medics: “The hopelessly ill are dangerous” i.e. may commit reckless acts undesirable by the state. For example, glioblastoma patients were routinely operated on, while it was believed by some staff that the treatment was generally useless, just forcing many patients to spend the rest of their lives in bed. Some authors wrote about fascism in oncology (Lebedev 2023). The

training of medical personnel under the imperative of readiness for war has been another motive. Thanks to the Internet, foreign literature is largely available in Russia these days, many guidelines being adjusted to international patterns. However, some published instructions have remained without due commentaries. Finally, the obstacles to the import of drugs and medical equipment should be mentioned. Domestic products are promoted sometimes despite questionable quality and possible counterfeiting (Senokosova 2019).

The nuclear threats and declarations of jihad by Russian officials (Light 2022; Stewart 2022) have appeared against the background of Soviet atheism, while religious vocabulary is misused for political purposes. It can be reasonably assumed that many church officials supporting the war in Ukraine are atheists acting in accordance with political directives. Certain non-Russian subjects of RF may be interested in a continuation of the fratricidal war, and there are misgivings that Vladimir Putin has come under their influence. The well-known ideologist Alexandr Dugin opined: “Every civilization has the right to decide about... death, good and evil” (Mettan 2023). Indeed, some terrorists have already made that decision. A preferred alternative would be a leadership centred in the most developed parts of the world, based on the principles of mercy, modesty and forgiveness, aimed at preservation of human life and health. The role of RF as a regional superpower would be honorable and satisfactory for sober-minded citizens. Instead of machismo and militarism, the propaganda should popularize the image of scrupulous and hardworking people. Ukraine must become a test field for the international trust and cooperation.

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## Conclusion

What are the mechanisms facilitating the use of invasive methods without sufficient indications: malicious intent, ignorance, thoughtlessness? Sabotage and thoughtlessness sometimes go hand in hand. When saboteurs get caught, they might exculpate themselves by pretended ignorance: “I acted according to instructions; so it is written in the textbook.” As far as we know, the Soviet and present rulers, the party and military nomenklatura, did not allow the use of invasive procedures without indications on themselves and their relatives. The same applies to medical personnel: it is unlikely that they applied dry cutting and poor-quality filling materials to questionable carious lesions in their children, cauterized cervical ectopies, or performed Halstead mastectomy on their family members. Functionaries’ sons did not treat gonorrhoea by tamponade and bougienage of the urethra (Chapter 13); alcoholics from their milieu were not compulsorily treated by drip infusions days on end being infected with viral hepatitis (Chapter 1), not to mention other operations described in this book. This means that there has been extensive deliberate infliction of bodily harm, which can be classified as fascism. The latter term is obtrusively used by Russian officials and media in relation to the Ukraine conflict. Objective self-criticism would be more advisable. Furthermore, among factors contributing to the use of invasive procedures with unproven efficiency have been the partial isolation from international scientific community, insufficient consideration of the principles of professional autonomy, informed consent and scientific polemics, paternalistic attitude to patients, ideation of punishment and covered sadism in some cases, as well as training of medical personnel. It is known that invasive procedures can exert a placebo effect, which might have contributed to reported efficiency of some methods discussed here. However, by definition, placebo must be free of risks and adverse effects. Declarations of improvement measures, taken by the government, are heard now as before, but their effectiveness is doubtful because the people are remaining the same. Considering shortcomings of medical practice, research and education, governmental directives and increase in funding is unlikely to be a solution. Measures for improvement of the healthcare in Russia must include participation of authorised foreign advisers.