A colo-adnexal fistula in serous adenocarcinoma of the ovary: management

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Abstract

Colo-ovarian fistulization is a rare complication of serous adenocarcinoma of the ovary. This clinical case provides insight into its pathophysiological consequences and the best therapeutic approach in this unusual situation.

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Introduction:

Colo-ovarian fistulization is a rare complication of serous adenocarcinoma of the ovary. The purpose of this case report is to clarify its pathophysiological consequences and to outline the best therapeutic approach in this unusual situation. Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

Case-report:

A 53-year-old woman with no relevant medical history, consulted for hypogastric pain of progressive onset since one week without spontaneous tendency to stop. On examination, she was febrile at 39.1°c, abdominal palpation revealed a warm painful mass whose upper limit was abutting the umbilicus. The biology noted a major inflammatory syndrome with WBC=16460/mm3, CRP=340mg/L. Abdominal CT demonstrated a well-limited, partitioned, retro-uterine pelvic mass measuring 200x154mm with an air-liquid image of left ovarian origin. She underwent an urgent surgery via a midline incision. Operative finding were as followed: inflamed ascites, a tumor-like swollen left ovary attracting adhesions with the last two ileal loops and invading the sigmoid colon whose contact surface is also affected along multiple lymph nodes lining the lower mesenteric artery. It was decided to perform an en-bloc resection with sigmoidectomy, creation of an end-loop colostomy considering the introduction of noardrenalin and anemia, total hysterectomy, bilateral oopohorectomy, peritonectomy of 2 pelvic parietal nodules, infra-gastric omentectomy and lombo-aortic curage; leaving no macroscopic residual disease pelvic. After an initial stay in the intensive care unit, she was returned to the ward with successful cessation of cathecolamines. Antibiotic therapy was maintained for 7 days with a combination of cefotaxime, metronidazole and gentamicine. The postoperative recovery was without complications and thepatient was discharged on postoperative Day 7. Anapath examination was consistent with a high-grade serous adenocarcinoma infiltrating the colonic wall. She had adjuvant chemotherapy. In the

absence of tumor regrowth or secondary localization on the follow-up CT scan, she was scheduled for stoma reversal surgery 5 months later. At follow up consultation, the patient is symptom-free with no evidence of recurrence on reassessement CT after 3 months.

Discussion:

Ovarian cancer is the leading cause of death from gynecological cancer [1]. Early-stage ovarian carcinoma seldom produces symptoms, and consequently more than half of all ovarian carcinomas are at an advanced stage[2]. 70% of patients are diagnosed at an advanced stage [1]. Although serous adenocarcinoma is the most common histological subtype [1], an exceptional complication has been described. According to a recent literature review by a Japanese team [2], regarding colo-adnexal fistula, only a case was noted with serous carcinoma. Fistulae usually occur after previous surgery and chemotherapy, in the setting of relapsed disease rather than as an initial presentation [3], spontaneous fistulization of ovarian cancer into digestive tract with a fistula tract is a different and rare phenomenon [4]. Direct invasion of ovarian cancer to the walls of the colon, rectum, and other organs is not unusual, the extension of ovarian cancer to invade the colon and rectum with resultant fistulas is extremely unusual [2]. Enterogenital fistulas occupy the dominant cause of gynecological fistulas, according to a retrospective national cohort study of women treated for gynecological fistula, whereas urogenital fistulas are the prerogative of post-hysterectomy women [5]. Formation of a fistula to the recto-sigmoid colon, is the most common site [2], accounting for 40% of all involved organs as described in KIZAKI and al. review [6]. This complication affects the prognosis. Indeed, the fistulous communication in the digestive lumen leads to the overflow of it microbial deposit. The tumor therefore becomes superinfected and may result in pelvic peritonitis in case of secondary rupture. Surgical treatment therefore becomes unavoidable. On the other hand, the patient is deprived of the benefit of undergoing neoadjuvant chemotherapy, which will decrease the chances of a complete macroscopic cytoreduction. In addition, the operative procedure becomes more laborious: the patient will require segmental colonic resection during the same narcosis. Trimming then suturing the fistula orifice by the colonic side seems to us inadequate because it is necessary to perform a monobloc resection of the entire conglomerate mass in order to comply with the carcinological constraints. Moreover, the disconnection of the fistula may induce a spillover of tumor clones into the large peritoneal cavity which will inevitably evolve into a peritoneal miliary. The other issue is the potential to leak stercoral and bowel flora contents into the peritoneal cavity. A primary anastomosis is required in clement conditions. In case of uncompensated hemodynamic state or peritoneal pyo-stercoral diffusion, transformation into a terminal stoma is the rule. Spontaneous resolution can be awaited with bowel discharge of pus as reported by KAZUOIMAMURA and al. [7], the patient reconsulted only after 46 years after a recrudescence of her symptoms. We cannot count on this eventuality while risking the expansion of suppuration and peritoneal neoplastic graft, without taking into account the overestimation of hospital costs dilapidated in the control. The case reported by SHAI et al. [8] demonstrates that a conservative treatment could be undertaken in order to avoid an extensive resecting surgery and to permit a neoadjuvant treatment but this eventuality will be validated only if the fistulous track has closed spontaneously thus requiring a simple separation of the two abutting viscera. But evidence of fistulous communication may be difficult to obtain with the usual imaging methods. Rectal contrast is not recommended during the period of acuitization, as it can repermeabilize or enlarge the visceral communication. Thus, it seems that this attitude could bring more risk than it offers safety. It is true that fistulization does not always imply a tumor invasion, the chronic inflammation inflicted by the iterative twisting attacks or chronic pressure causes this fistulous communication as it was described by [2]. This is explained by the fact that the dermoid cyst, which for a long time was proclaimed to be at risk of torsion because of its large size [9] occupies the first rank of the histological type involved in oophoro-sigmoid fistula. But, considering the high probability of cancerous invasion causing fistulization, reaching up to 38% according to the review of KIZAKI and al. [6], en-bloc resection is imperative in order not to leave a residual neoplastic niche. Finally, considering that concomitant colo-rectal resection doesn't worsen the prognosis, an optimal resection is the mainstray of available therapeutic tools. This is supported by the review by FOURNIER [10] who recommend extensive resection which has little influence on post-operative morbidity but significantly improves survival.

Conclusion:

This clinical case provides insight into a rare complication, which could disrupt the ongoing course of serous adenocarcinoma of the ovary, thus allowing for prompt and appropriate treatment.

References:

[1] N. Mederos, A. Wolfer, P. Mathevet, M. Zaher, A. Sarivalasis, Le cancer séreux de haut gradede l'ovaire en 2018 : avanceeset controverses, Revue Medicale Suisse. 14 (2018) 1037–1041. https://doi.org/10.53738/REVMED.2018.14.607.1037.

[2] N. Yahagi, Y. Kobayashi, T. Ohara, N. Suzuki, K. Kiguchi, B. Ishizuka, Ovarian carcinoma complicated by sigmoid colon fistula formation: A case report and review of the literature: Colon fistula formation, Journal of Obstetrics and Gynaecology Research. 37 (2011) 250–253. https://doi.org/10.1111/j.1447-0756.2010.01341.x.

[3] The risk of gastrointestinal perforation and/or fistula in patients with recurrent ovarian cancer receiving bevacizumab compared to standard chemotherapy: A retrospective cohort study - Gynecologic Oncology, (n.d.). https://www.gynecologiconcology-online.net/article/S0090-8258(09)00377-1/fulltext (accessed July 30, 2022).

[4] I. Ureyen, T. Toptas, S.A. Tatar, G. Ekin, F. Gulec, A. Uysal, Jejunal Fistula Complicating Ovarian Serous Carcinoma: Case Report of a Rare Phenomenon and Review of the Literature, Gynecol Obstet Reprod Med. 27 (2021) 184–186. https://doi.org/10.21613/GORM.2018.816.

[5] K.F. Borseth, G. Acharya, T. Kiserud, J. Trovik, Incidence of gynecological fistula and its surgical treatment: A national registry-based study, Acta Obstet Gynecol Scand. 98 (2019) 1120–1126. https://doi.org/10.1111/aogs.13611.

[6] Y. Kizaki, T. Nagai, K. Ohara, Y. Gomi, T. Akahori, Y. Ono, S. Matsunaga, Y. Takai, M. Saito, K. Baba, H. Seki, Ovarian mature cystic teratoma with fistula formation into the rectum: a case report, SpringerPlus. 5 (2016) 1700. https://doi.org/10.1186/s40064-016-3426-4.

[7] K. Imamura, H. Nishimura, M. Takao, T. Maruuchi, Y. Ogou, Y. Kiyozuka, Y. Muraoka, M. Yakushiji, Ovarian tumor complicated by a colo-ovarian fistula, Oncol Rep. (1997). https://doi.org/10.3892/or.4.6.1277.

[8] A. Shai, E. Grikshtas, Y. Segev, M. Moskovitz, A. Bitterman, M. Steiner, O. Lavie, Conservative Management for an Entero-Adnexal Fistula at Initial Presentation of Advanced Ovarian Carcinoma, Current Oncology. 20 (2013) 44–47. https://doi.org/10.3747/co.20.1196.

[9] (n.d.). http://www.cngof.net/E-book/GO-2016/26-ch19-201-212-9782294715518-T-ovaire.html (accessed July 29, 2022).

[10] M. Fournier, Morbidite des resections recto-sigmoidiennes dans la chirurgie de cytoreduction des cancers de l'ovaire, (n.d.) 48.