

Comprehensive management strategy for cervical cancer screening, cervical lesion diagnosis, and treatment of cervical lesions during the COVID-19 pandemic: Chinese expert consensus

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Short title: Cervical cancer in COVID-19 period

Abstract

SARS-CoV-2 infection outbreak has been going on for nearly a year since December 2019. With the implementation of national risk management policy, SARS-CoV-2 infection has been effectively controlled in China. In the absence of a SARS-CoV-2 vaccine, the second wave of COVID-19 may still break out due to frequent personnel exchanges around the world. The Colposcopy and Cervical Lesions of the Chinese Association of Obstetricians and Gynecologists (CCNC) collected management experience in the diagnosis and treatment of cervical lesions and cancers at different risk stages during the COVID-19 pandemic. In order to evaluate feasible treatment options at different risk levels, a comprehensive management strategy for cervical cancer screening, diagnosis and treatment has been developed. The implementation of this expert consensus can help doctors in hospitals and regions around the world to carry out different degrees of protection according to the risk of SARS-CoV-2 infection, including cervical vaccination, cervical cancer screening, abnormal treatment of screening results, and treatment of precancerous lesions or lower genital tract cancer.

With the release and implementation of this expert consensus, we will be more confident to adopt different principles in the face of different degrees of COVID-19 pandemic. While ensuring the safety of medical staff and patients, it can also ensure that the diagnosis and treatment of cervical cancer is carried out as planned during the COVID-19 pandemic. WHO announced that the elimination mission of cervical cancer will not be delayed due to the COVID-19 pandemic.

Background

The novel coronavirus causes acute infectious disease. It is designated as a Class B infectious disease by Class A management under the Law of the People's Republic of China on the Prevention and Control of Infectious Diseases. During the outbreak, it is necessary to implement hierarchical emergency prevention and control according to the National Emergency Plan for Public Emergencies [1]. According to the properties of the emergency, the extent of harm, and the scope of the public health emergency, four levels of emergency have been defined: particularly serious (grade I), serious (grade II), major (grade III), and general (grade IV).

Cervical cancer screening and the diagnosis and treatment of cervical lesions are important long-term projects for the prevention and treatment of cervical cancer in China. However, proper management of cervical cancer screening and the diagnosis and treatment of cervical lesions during the COVID-19 pandemic is a challenge.

Experts from the Professional Committee for Colposcopy and Cervical Lesions of Chinese Obstetricians and Gynecologists Association (CCNC) have formulated a comprehensive management strategy for cervical cancer screening and the diagnosis and treatment of cervical lesions during the COVID-19 epidemic based on the Law of the People's Republic of China on the Prevention and Control of Infectious Diseases, the Frontier Health and Quarantine Law of the People's Republic of China Governing Foreign-Related Matters (2018 Edition), the Contingency Rules of Paroxysmal Public Health Events [2], the National Emergency Plan for Public Emergencies, the New Coronavirus Pneumonia Diagnosis and Treatment Plan (Trial 8 Edition) [3], and the Management of Gynecology Patients during the Coronavirus Disease 2019 Pandemic: Chinese Expert Consensus [4].

Protection of personnel in colposcopy outpatient clinics during the epidemic

The prevention and control of disease in the gynecological outpatient services during the epidemic period follows the guidance of the Management of Gynecology Patients during the Coronavirus Disease 2019 Pandemic: Chinese Expert Consensus.

The following are the recommendations for colposcopy outpatient clinics during the epidemic:

Protection of medical professionals in outpatient clinic for colposcopy and lower genital tract diseases

Although there is evidence that the risk of coronavirus in the lower genital tract is low, medical professionals still have the risk of exposure to coronavirus infection during the diagnosis and treatment of lower genital tract diseases.

Medical professionals must strictly follow the guidance of the Common Medical Protective Products Use for the Prevention and Control of Novel Coronavirus Infection Guidelines (Trial) [5]. It remains uncertain whether COVID-19 can be transmitted via aerosols. It is suggested that the smoke exhaust device should be turned on during the electrosurgical operation for lower genital tract lesions, such as LEEP, laser, etc. To reduce the amount of surgical smoke, electrical surgery energy equipment can be set at a low-power level and continuous use can be reduced. Moreover, the use of electrosurgical instruments for hemostasis can be reduced.

It should be noted that the principle of disease treatment should not be violated due to the risk of the virus caused by smoke.

Specimen handling and transportation

Fixed specimen collection areas for vaginal secretions and cytology and biopsy specimens should be set up and disinfected regularly. Specimens should be placed in an isolated leak-proof transport box and transported by specialized personnel. Specimen delivery personnel and pathology or laboratory receiving personnel should wear standard protective clothing that meets the risk level and should avoid direct contact with specimens. After specimen transfer, personnel should clean and disinfect immediately. It is necessary to establish a record of personnel and specimen registration for traceability and transmission. Patients or family members are not permitted to deliver specimens to the hospital.

Medical waste disposal

The treatment of medical waste is based on the following principle: Separate the infectious medical waste generated during the diagnosis and treatment of patients infected with SARS-Cov-2 virus from general medical waste. The working area should be cleaned every day, and the medical garbage should be cleaned up more than twice a day. Medical waste, including protective equipment for medical personnel and disposable articles (cotton swabs, vaginal dilators, gauze, biopsy forceps, sanitary articles), should not overflow the medical garbage can, which should be cleaned at least once every 1–4 h. Red “infectious waste” signs should be printed or pasted on the waste bags, and the temporary storage time should not exceed 24 h.

All medical waste must be strictly handled in accordance with the Medical Waste Management Regulations [6] and the Management and Technical Guidelines for Emergency Disposal of Medical Wastes during the COVID-19 Pandemic (Trial) [7].

Tertiary prevention of cervical cancer during the COVID-19 epidemic

During the COVID-19 epidemic period, the management of HPV vaccination, cervical cancer screening, and the diagnosis and treatment of cervical lesions should be adjusted according to the level of emergency and the management policies announced by the government. Relevant institutions need to manage and evaluate the delays in screening, diagnosis, and follow-up of cervical cancer caused by the COVID-19 epidemic. Appropriate measures and management should be taken to maintain the annual cervical cancer screening and treatment population.

Whenever the epidemic situation of COVID-19 is effectively controlled, HPV vaccination, cervical cancer screening, and patient management should be gradually resumed in accordance with the Expert Consensus on Issues Related to Cervical Cancer Screening and Management of Cervical Abnormalities: Chinese Expert Consensus [8,9] and the Application of Colposcopy: Chinese Expert Consensus [10].

In areas where cervical cancer screening is suspended, relevant institutions should establish data management for patients with delayed screening and for those who need to be recalled for treatment, and update them regularly. For those who have been scheduled but have not been screened, cervical cancer screening tasks should be resumed gradually after the risk of the COVID-19 epidemic has been downgraded.

For patients with cervical abnormalities, follow-up files should be established, and the condition and possible treatment plan should be relayed to patients by telephone or Internet. When the risk of the COVID-19 epidemic has been downgraded, patients should be informed and appointments for examination and treatment should be scheduled.

In regions that restart organized screening, risk control plans are still needed, which should focus on population control, body temperature testing, tourism history, and close contact history in high-risk areas. It is suggested that medical staff still need to take a high level of self-protection measures. The transportation and examination of specimens should follow the epidemic prevention measures.

To ensure the quality control of HPV self-sampling screening, a video or file of the self-sampling operation must be taken as an operation specification in the HPV self-sampling screening tracking implementation area. Those who have not had an HPV vaccination need to make an online appointment when the risk level of the epidemic has been reduced. Those who have received part of the HPV vaccine can postpone the next vaccination, but it should not exceed 12–15 months after the first vaccination [11].

Establish a database of patients with abnormal screening results to record information about all patients who need to be checked but have been delayed due to the epidemic, so that the diagnosis and treatment can be planned for when the risk of the COVID-19 epidemic has been downgraded.

Telemedicine consultation can be strengthened for preliminary assessment and guidance for patients. Telemedicine consultation, medical records, or image data (such as colposcopy and/or pathology images) can be uploaded and interpreted remotely. This will ensure that patients continue to receive standard clinical care while reducing the risk of overcrowding in hospitals.

For patients with precancerous lesions or lower genital tract cancer confirmed by histology, the risk of disease progression should be comprehensively evaluated, and the next diagnosis or treatment should be arranged as soon as possible during the epidemic period (Table.1).

High-risk areas: particularly serious (grade I)

1. For vaccination: HPV vaccination should be stopped.
2. For screening: organized cervical cancer screening should be stopped. When the risk level of COVID-19 is reduced, it is recommended that the opportunistic screening should be prioritized for high-risk groups, and then the organized screening of cervical cancer should be resumed.
3. For cervical abnormalities by screening: Routine colposcopy should be stopped and only emergency patients should be treated. If colposcopy evaluation is necessary, both patients and medical staff should implement adequate protection.
4. For precancerous lesions or lower genital tract cancer confirmed by histology: surgery or related invasive treatment should be postponed. If surgical treatment is necessary, patients with invasive or suspected cancer should be given priority. Both patients and medical staff need to implement adequate protection.

Medium-risk areas: serious (grade II) and major (grade III)

1. For vaccination: Vaccination can only be implemented after being approved by the director of the medical and health institution according to the epidemic risk assessment.
2. For screening: Opportunistic screening of the high-risk population should be the main task, and organized screening should only be carried out after the approval of the relevant medical and health institutions.
3. For cervical abnormalities by screening: Hierarchical management should be carried out according to the risk of cervical cancer and cervical lesions. Plan to schedule patients for colposcopy or follow-up. For patients with suspected cancer (SCC, AGC FN, AIS, ACC) after screening, it is recommended to arrange colposcopy within 2 weeks. Patients with high-risk screening results [HPV16/18(+), ASCUS and HPV16/18(+), LSIL and hrHPV(+), ASC-H, HSIL, AGS-NOS] should be evaluated and diagnosed by colposcopy within 4–6 weeks after obtaining the screening results. Patients with low-risk screening results [hrHPV(+) with HPV16/18(-) and cytological NILM or ASCUS, ASCUS +hrHPV (-), LSIL +

hrHPV(-)] with no clinical symptoms or specific risk factors can be postponed for colposcopy within 6–8 weeks.

4. For precancerous lesions or lower genital tract cancer confirmed by histology: For invasive cervical, vaginal, and vulvar cancer confirmed by histology or suspected by diagnosis, further evaluation or treatment should be arranged within 2–4 weeks. For highly intraepithelial lesions of the cervix, vagina, and vulva (HSIL/-IN3, AIS), it is recommended that the treatment should be carried out within 3 months. For conservative cases of HSIL/- in2 in the lower genital tract, treatment or evaluation can be delayed for 6 months. For low-grade intraepithelial lesions of the lower genital tract: Further evaluation should be postponed for 6–12 months. The first follow-up should be completed within 6 months after surgical treatment and no more than 12 months after surgery. Follow-up should include cytology and HR-HPV (HPV self-sampling can be used if conditions permit). Follow-up results and corresponding medical advice can be relayed by telephone, internet, or telemedicine. Abnormal results during follow-up should be treated according to the abnormal management process of screening results.

Low-risk areas: general (grade IV)

1. For vaccination: normal vaccination.
2. For screening: While resuming cervical cancer organized screening, the number and intensity of opportunistic screenings should be strengthened to reduce the risk of cervical cancer caused by delayed screening during the epidemic period.
3. For cervical abnormalities by screening: The evaluation and follow-up of colposcopies not completed during the epidemic should be completed according to the results of the high- to low-risk screening results of patients.
4. For precancerous lesions or lower genital tract cancer confirmed by histology: Patients should be treated and managed in accordance with the Application of Colposcopy: Chinese Expert Consensus [10].

Psychological counseling for patients with cervical lesions during the epidemic

During the epidemic, patients with cervical lesions may have different degrees of psychological problems, such as fear, anxiety, depression, etc., due to the delay or interruption of diagnosis and treatment. It is recommended that medical institutions and medical staff use telephone, WeChat, telemedicine, etc. to carry out disease explanation and psychological counseling for patients to reduce their psychological pressure. Appropriate treatment and follow-up plans should be arranged based on the risk of disease and the epidemic situation.

Continuing education for professionals during the epidemic

During the outbreak, the medical association or continuing education courses must meet the requirements of the local health management department. Professional committees or medical institutions at all levels should make extensive use of network video communication (such as webinars) to ensure the updating of professional theoretical knowledge and the cultivation of clinical skills.

Consensus statement

1. This consensus should be used only as a guide for cervical precancerous and cancer screening, and diagnosis and treatment during the COVID-19 epidemic, and not as a legal basis.
2. If this consensus does not fully comply with the procedures established by the local health management department or hospital, it will be implemented in accordance with local regulations.
3. Individualized diagnosis and treatment can be performed according to actual clinical and specific conditions.

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Conflict of interest

The authors report no conflict of interest.

Authors' contributions

Lang J contributed the conception, goal, and supporting. Chen F contributed the consensus planning and expert coordination. Chen F, Liu J, Liou YL contributed the carrying out and writing of this manuscript. Liu A, You ZX, Li S, and Sui L contributed COVID-19 regulation, data, and implementable scheme. All the decisions of the consensus were discussion and approved by all experts in the web conference. The experts of CCNC agreed the publication of the consensus. All authors read and approved the final manuscript.

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