

9. BÖLÜM / CHAPTER 9

Women's Health and COVID-19

Kadın Sağlığı ve COVID-19

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ABSTRACT

COVID-19, caused by the SARS-CoV-2 virus, has spread rapidly all over the world, causing considerable mortality and morbidity. It has become a pandemic with a total of 15.000.000 cases and 620.000 deaths worldwide as of July 2020. In this period, guidelines have been created in gynecology, as in many other areas, to ensure safe access to health services and to use resources responsibly. During the outbreak, digital technologies have become surrogates of in-person visits in certain situations. In this review, suggestions to guide the gynecological practice during COVID-19 pandemic are summarized. Triage is mandatory for all patients admitted to the gynecology outpatient clinic. Patients can be counseled through teleconference about contraception, urogynecological problems, or postoperative follow-up in certain situations. In emergency situations, all patients with stable vital signs should be screened for COVID-19 initially. When the intervention cannot be postponed until the test results, it should be managed assuming the test is positive. Situations, where a face-to-face meeting is critical in ensuring accurate diagnosis and treatment, continue inevitably. It is imperative to continue preventive measures until an effective treatment or vaccine against COVID-19 is found. The fight against the pandemic can be efficient only if the guidelines can be dynamically adapted based on ever-increasing new data.

Keywords: SARS-CoV-2, COVID-19, gynecology, gynecologic surgery

ÖZ

SARS-CoV-2 virüsünün neden olduğu COVID-19, tüm dünyada hızla yayılarak önemli ölçüde morbidite ve mortaliteye neden olmuştur. 2020 yılı Temmuz ayı itibarıyla, dünya çapında toplam 15.000.000 vaka ve 620.000 ölüm bildirilmiş ve küresel salgın halini almıştır. Bu dönemde, diğer birçok alanda olduğu gibi jinekolojide de sağlık hizmetlerine güvenli erişim sağlamak ve kaynakları doğru kullanmak için rehberler oluşturulmuştur. Salgın sırasında, dijital teknolojiler belli noktalarda yüz yüze görüşmenin yerini almaktadır. Bu derlemede, COVID-19 salgını sırasında jinekolojik uygulamaya rehberlik edecek öneriler özetlenmiştir. Jinekoloji polikliniğine ayaktan başvuran tüm hastalar için triyaj yapılması zorunludur. Hastalara kontrasepsiyon, ürojinekolojik sorunlar ya da belirli durumlarda postoperatif dönemdeki takipler hakkında telekonferans yoluyla bilgi verilebilir. Acil durumlarda, vital bulguları stabil olan tüm hastalara öncelikle COVID-19 taraması yapılmalıdır. COVID-19 tarama testi sonuçlanana kadar müdahalenin ertelenmediği durumlarda, COVID-19 tarama testinin pozitif olduğu varsayılarak işlem yapılmalıdır. Doğru teşhis ve tedavinin sağlanmasında yüz yüze görüşmenin kritik olduğu durumlar kaçınılmaz olarak devam etmektedir. COVID-19'a karşı etkili bir tedavi ya da aşı bulunana kadar önleyici tedbirlere devam etmek zorunludur. Küresel salgına karşı mücadele, ancak rehberlerin elde edilen verilere göre dinamik olarak düzenlenmesi durumunda başarılı olacaktır.

Anahtar Kelimeler: SARS-CoV-2, COVID-19, jinekoloji, jinekolojik cerrahi

INTRODUCTION

COVID-19, caused by the new type of coronavirus, SARS-CoV-2, emerging in China in December 2019, has become a pandemic with a total of 16800000 cases and 660000 deaths worldwide as of July 2020. In our country, 228900 cases and 5600 deaths were reported in the same period (1). The rapidly increasing number of cases has required the urgent development of new strategies for easy access to health services and the efficient use of resources. Gynecological counseling and management practices for women have also been affected in this period, and the focus of the scientific community has shifted to produce diagnosis and treatment guidelines that prioritize the safety of both women and health professionals.

Triage is mandatory for all patients admitted to the gynecology outpatient clinic. Patients with symptoms such as fever, cough, or contact history should be referred to the COVID-19 clinic initially. For this purpose, before the patient enters the outpatient clinic, COVID-19 symptoms should be questioned in terms of travel and contact history, and fever should be measured. In-person visits of patients with a suspected or definitive diagnosis of COVID-19 should be postponed until the patient is free of COVID-19 (2). Patients can be counseled through teleconferencing or videoconferencing where available.

Clearly, contraception can be consulted through teleconference. New users can be counseled, medical eligibility criteria can be screened, and some side effects can be managed without in-person contact (3). There is evidence that patients without risk factors can continue with the contraceptive method they are familiar with (4). Removal of long-acting contraceptive methods such as intrauterine devices or implants may have coincided with the pandemic period. Current evidence suggests that the risk of pregnancy while using a long-acting contraceptive method for more than 1 to 2 years after the expiration date remains extremely low (4). In a systematic review, the pooled pregnancy rate for the levonorgestrel intrauterine device was found to be 0.02 per 100 person-years in year 7. For copper IUD, it was 0.0 per 100 person-years in year 12 (5). These data indicate that the removal of a long-acting method can be extended for a while during the pandemic period.

The use of hormonal methods has become controversial as the new type of coronavirus is associated with hypercoagulopathy (6). Venous thromboembolism related to contraception use is rare in young women without risk factors (4). Combined oral contraceptive therapy can be continued in COVID-19 negative women who are not prone to thrombophilia. Also, there is insufficient evidence to support quitting hormone therapy for peri and postmenopausal women who are COVID-19 negative. However, in COVID-19 positive women, some recent reports recommend the use of hormonal methods, based on the clinical presentation. According to current data, pharmacological interactions between available hormonal contraceptive methods and promising COVID-19 therapies are negligible (4). Therefore, women with mild COVID-19 symptoms may continue hormone therapy, if needed. These patients may be offered low-molecular-weight heparin (LMWH) at prophylactic doses. On the other hand, for women with confirmed COVID-19 who meet the criteria for hospitalization, systemic hormone therapy should be withdrawn. In this case, LMWH administration at therapeutic doses should be considered. If it is not possible to discontinue hormonal preparations, transdermal estrogen, progesterone only pills or vaginal estrogen preparations should be preferred (3-6). When these patients are fully recovered and actively mobilized, they can return to the pre-COVID treatment regimen (6).

Another controversial issue is the cessation of assisted reproductive treatments during the outbreak. At the beginning of the pandemic, American Society for Reproductive Medicine (ASRM) recommend-

ed to cancel new, non-urgent treatment cycles and embryo transfers immediately (8). However, it seems like the SARS-CoV-2 virus spread is yet to be over and, assisted reproductive treatments should be rearranged following local regulations. Fertility preservation, advanced maternal age, and diminished ovarian reserve are considered as urgent indications. Stimulation and cryopreservation are recommended for these patients (9). European Society of Human Reproduction and Embryology (ESHRE) stated that the risk of any viral contamination in gametes and embryos in the laboratory would be minimal because of repeated washing steps for culture and freezing protocols (10).

Urogynecological problems can be evaluated without in-person contact in some cases. Uncomplicated urinary tract infections can be treated with empirical antibiotic therapy through teleconference (11). Prior culture results can be used to guide empiric therapy (12,13). If complicated urinary tract infection is suspected, initiation of broad-spectrum antibiotic therapy may be recommended. When the symptoms are severe or there is a lack of response to oral antibiotics, the patient should be admitted to hospital (14,15). Providers should keep in mind that COVID-19 may present with some atypical symptoms along with fever (11).

Stress, urge, or mixed urinary incontinence can be discussed and treated through teleconference. Patients can perform behavioral interventions, including bladder training, yoga, and Kegel exercises, without leaving home (16). Patients using pessary should be supported to remove, clean, and reinsert it (17). On the other hand, studies show that complications such as vaginal bleeding or erosion, and fistula formation are quite rare, even when the pessary remains in place for 6 to 24 months (18,19).

Evaluation of pelvic organ prolapse can be challenging without physical examination (11). It has been reported that only 10-20% of diagnosed women progressed within two years. Therefore, the treatment plan can be delayed until the end of the pandemic period (20,21). Weight loss, reducing activities that strain the pelvic floor, smoking cessation, and avoiding constipation may improve symptoms (22).

Patients with premalignant and malignant lesions are another group that should be evaluated with precision during the COVID-19 outbreak. It is recommended that fertility-sparing surgeries continue during this period (23). Patients scheduled for conization due to cervical dysplasia can be operated on because the operation time is short and hospitalization is usually not necessary (23). In the absence of a macroscopic lesion, interventions may be postponed for a maximum of three months (24). Similarly, endometrial lesions should be evaluated by hysteroscopic examination or the simplest technique available in out-patient settings (23). If endometrial carcinoma is excluded, hormonal treatment options should consider instead of surgery (25). Adnexal mass should be evaluated with tumor markers and ultrasound exam as before the outbreak. If malignancy is concerned, surgery should be planned (25).

Treatment of malignant lesions should be planned based on the disease stage to provide the shortest hospitalization time possible (23,25). As for endometrial cancer, it is convenient to recommend to schedule surgery after a comprehensive evaluation of both tumor characteristics and risk of COVID-19, when the tumor is less aggressive (26). Postoperatively, most of the patients can be followed up through teleconference. As the evidence does not support routine follow-up in asymptomatic patients, follow up visits can be postponed until the end of the outbreak for these women (23).

Despite all these measures, in some cases, hospital admission can be inevitable. These include cases with urinary retention, acute weight loss, rectal bleeding, persistent nausea, vomiting, and abdominal pain or failure to respond to the recommended treatment. There is not enough data to predict the

risk of transmission of COVID-19 in any given hospitalized patient. It is conceivable that advanced age, immunosuppression, and diabetes mellitus can prove to be risk factors regarding morbidity and mortality of both coronavirus infection and the existing pathology (27). Since the risk of COVID-19 transmission and associated mortality is considerable even in patients without any risk factors, it would be prudent to avoid any hospital admission unless necessary.

In emergent situations, all patients with stable vital signs should be screened for COVID-19 initially. Providers should consider conservative treatments as the first option whenever possible. Whenever surgical intervention is inevitable, such as ovarian torsion, or ruptured ectopic pregnancy, available data suggest COVID-19 testing and risk assessment, depending on the degree of urgency (28). When the operation cannot be postponed until the test results, it should be managed assuming the test is positive.

In infected patients, SARS-CoV-2 can be found in the abdominal cavity and can be nebulized from body fluids during surgery (25). Although the risk of aerosol spread appears to be lower with laparotomy, there is no evidence that laparoscopic gynecological surgery increases virus spreading if personal protective equipment is used correctly (29). The presence of the virus in feces makes operations involving the intestines riskier than gynecological procedures (30). Therefore, emergency gynecological operations that carry a risk of bowel involvement should be performed by laparotomy (29). On the other hand, the advantages of laparoscopy, such as reduced morbidity, shorter hospitalization time, and faster recovery, will provide additional benefits to use hospital resources more effectively during the outbreak (31). When performing laparoscopy, suction devices, smoke evacuation filters, retrieval devices, and swabs are recommended to prevent aerosol and droplet transmission (29). Also, regardless of the preferred method, the operation should be held in a room with negative air pressure. All theatre staff must use personal protective equipment. Additionally, disposable equipment should be preferred wherever possible (2).

When the rate of spread of the virus slows down, several factors should be taken into account when re-planning elective operations. Factors such as hospital resources, local data, test capacity, access to personal protective equipment should be taken into consideration (32). It would be appropriate to compare the risk of SARS-CoV-2 infection with the morbidity caused by the existing benign pathologies on a patient basis. It may be considered to postpone surgical procedures that will require long-term hospitalization or rehabilitation in the postoperative period until an effective treatment or vaccine is found. The experience from China is that the second wave is almost inevitable (33,34). Thus, it would be rational to protect the appropriate wards for COVID-19 patients in health institutions for a while.

For patients who are COVID-19 negative after elective surgery, but infected in the postoperative period, some risk factors including advanced age, presence of comorbidity, and complexity of operation have been reported to be poor prognostic factors. These patients require intensive care unit admission more frequently than patients who have similar features and have not had surgery (35). The success of clinics in returning to the pre-COVID-19 period also depends on conducting adequate and appropriate screening and diagnostic tests (32).

All these recommendations are based on limited data and common sense. The fight against the pandemic can be efficient only if the guidelines can be dynamically adapted based on ever-increasing new data. Digital technologies have become indispensable for the maintenance of the 'new normal'. Nevertheless, situations where a face-to-face meeting is critical in ensuring accurate diagnosis and treatment continue inevitably. It is imperative to continue preventive measures until an effective treatment or vaccine against COVID-19 is found.

REFERENCES / KAYNAKLAR

1. World Health Organization Coronavirus Disease (COVID-19) Dashboard. [cited 2020 Jul 30]. Available from: <https://covid19.who.int>
2. Qiu L, Morse A, Di W, Song L, Kong B et al. Management of gynecology patients during the coronavirus disease 2019 pandemic: Experts from the Chinese Obstetricians and Gynecologists Association *Am J Obstet Gynecol*. 2020 Jul; 223(1): 3-8.
3. Nanda K, Lebetkin E, Steiner MJ, Yacobson I, Dorflinger LJ. Contraception in the Era of COVID-19. *Glob Heal Sci Pract*. 2020; 8(2): 166-8.
4. Ferreira-Filho ES, de Melo NR, Sorpreso ICE, Bahamondes L, Simões RDS, Soares-Júnior JM, et al. Contraception and reproductive planning during the COVID-19 pandemic. *Expert Rev Clin Pharmacol*. 2020; 13(6): 615-22.
5. Ti AJ, Roe AH, Whitehouse KC, Smith RA, Gaffield ME, Curtis KM. Effectiveness and safety of extending intrauterine device duration: a systematic review. *Am J Obstet Gynecol*. 2020; 223(1): 24-35.e3.
6. Ramírez I, De la Viuda E, Baquedano L, Coronado P, Llana P, Mendoza N, et al. Managing thromboembolic risk with menopausal hormone therapy and hormonal contraception in the COVID-19 pandemic: Recommendations from the Spanish Menopause Society, Sociedad Española de Ginecología y Obstetricia and Sociedad Española de Trombosis y Hemos. *Maturitas*. 2020; 137: 57-62.
7. Paschou SA, Goulis DG, Lambrinoudaki I, Papanas N. Menopausal hormone therapy for women with obesity in the era of COVID-19. *Case Reports Women's Health*. 2020; 27: e00233. doi: 10.1016/j.crwh.2020.e00233
8. American Society for Reproductive Medicine. American Society for Reproductive Medicine Patient Management and Clinical Recommendations during the Coronavirus (COVID-19) Pandemic Update #4 (May 11, 2020 through June 8, 2020). Available from: <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate4.pdf>
9. Requena A, Cruz M, Vergara V, Prados N, Galliano D, Pellicer A. A picture of the covid-19 impact on IVIRMA fertility treatment clinics in Spain and Italy. *Reprod Biomed Online*. 2020; 41(1): 1-5.
10. ESHRE news and statements. Assisted Reproduction and Covid-19. An updated statement from ESHRE. Available from: https://www.eshre.eu/Press-Room/ESHRE-News#COVID19_April2.
11. Grimes CL, Balk EM, Crisp CC, Antosh DD, Murphy M, Halder GE, et al. A guide for urogynecologic patient care utilizing telemedicine during the COVID-19 pandemic: review of existing evidence. *Int Urogynecol J*. 2020; 31(6): 1063-89.
12. MacFadden DR, Ridgway JP, Robicsek A, Elligsen M, Daneman N. Predictive Utility of Prior Positive Urine Cultures. *Clin Infect Dis*. 2014; 59(9): 1265-71.
13. Vellinga A, Cormican M, Hanahoe B, Murphy AW. Predictive value of antimicrobial susceptibility from previous urinary tract infection in the treatment of re-infection. *Br J Gen Pract*. 2010; 60(576): 511-3.
14. Hsueh P-R, Hoban DJ, Carmeli Y, Chen S-Y, Desikan S, Alejandria M, et al. Consensus review of the epidemiology and appropriate antimicrobial therapy of complicated urinary tract infections in Asia-Pacific region. *J Infect*. 2011; 63(2): 114-23.
15. Bader MS, Hawboldt J, Brooks A. Management of complicated urinary tract infections in the era of antimicrobial resistance. *Postgrad Med*. 2010; 122(6): 7-15.
16. Balk E, Adam GP, Kimmel H, Rofeberg V, Saeed I, Jeppson P, et al. Nonsurgical treatments for urinary incontinence in women: a systematic review update. Rockville (MD): Agency for Healthcare Research and Quality (US); 2018 Aug. (Comparative Effectiveness Review, No. 212.) Available from: <https://www.ncbi.nlm.nih.gov/books/NBK53>
17. Manchana T. Ring pessary for all pelvic organ prolapse. *Arch Gynecol Obstet*. 2011; 284(2): 391-5.
18. Miceli A, Fernández-Sánchez M, Polo-Padillo J, Dueñas-Díez J-L. Is it safe and effective to maintain the vaginal pessary without removing it for 2 consecutive years? *Int Urogynecol J*. 2020. doi: 10.1007/s00192-020-04240-5
19. Thys SD, Hakvoort RA, Asseler J, Milani AL, Vollebregt A, Roovers JP. Effect of pessary cleaning and optimal time interval for follow-up: a prospective cohort study. *Int Urogynecol J*. 2020; 31(8): 1567-74.
20. Bradley CS, Zimmerman MB, Qi Y, Nygaard IE. Natural history of pelvic organ prolapse in postmenopausal women. *Obstet Gynecol*. 2007; 109(4): 848-54.

21. Gilchrist AS, Campbell W, Steele H, Brazell H, Foote J, Swift S. Outcomes of observation as therapy for pelvic organ prolapse: a study in the natural history of pelvic organ prolapse. *Neurourol Urodyn.* 2013; 32(4): 383-6.
22. Dumoulin C, Hunter KF, Moore K, Bradley CS, Burgio KL, Hagen S, et al. Conservative management for female urinary incontinence and pelvic organ prolapse review 2013: Summary of the 5th International Consultation on Incontinence. *Neurourol Urodyn.* 2016; 35(1): 15-20.
23. Bogani G, Brusadelli C, Guerrisi R, Lopez S, Signorelli M, Ditto A, et al. Gynecologic oncology at the time of COVID-19 outbreak. *J Gynecol Oncol.* 2020; 31(4): e72. doi: 10.3802/jgo.2020.31.e72
24. Bogani G, Ditto A, Martinelli F, Mosca L, Chiappa V, Rossetti D, et al. LASER treatment for women with high-grade vaginal intraepithelial neoplasia: A propensity-matched analysis on the efficacy of ablative versus excisional procedures. *Lasers Surg Med.* 2018; 50(9): 933-9.
25. Chiofalo B, Baiocco E, Mancini E, Vocaturo G, Cutillo G, Vincenzoni C, et al. Practical recommendations for gynecologic surgery during the COVID-19 pandemic. *Int J Gynecol Obstet.* 2020; 150: 146-50.
26. Wang Y, Zhang S, Wei L, Lin Z, Wang X, Wang J, et al. Recommendations on management of gynecological malignancies during the COVID-19 pandemic: Perspectives from Chinese gynecological oncologists. *J Gynecol Oncol.* 2020; 31(4): e68. doi:10.3802/jgo.2020.31.e68
27. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet.* 2020; 395(10223): 507-13.
28. Brücher BLDM, Nigri G, Tinelli A, Lapena JFF, Espin-Basany E, Macri P, et al. COVID-19: Pandemic surgery guidance. *4open.* 2020; 3: 1. doi: <https://doi.org/10.1051/fopen/2020002>
29. Royal College of Obstetricians and Gynaecologists (RCOG) (2020). RCOG – BSGE Statement on gynaecological laparoscopic procedures and COVID-19. Published 26 March 2020. Available from: <https://mk0britishsocioep8d9m.kinstacdn.com/wpcontent/uploads/2020/03/Joint-RCOG-BSGE-Statement-ongynaecological-laparoscopic-procedures-and-COVID-19.pdf>
30. Wang W, Xu Y, Gao R, Lu R, Han K, Wu G, et al. Detection of SARS-CoV-2 in Different Types of Clinical Specimens. *JAMA.* 2020; 323(18): 1843-4.
31. Snyman L, Makulana T, Makin JD. A randomised trial comparing laparoscopy with laparotomy in the management of women with ruptured ectopic pregnancy. *S Afr Med J.* 2017; 107(3): 258-63.
32. Paraiso MFR, Brown J, Abrão MS, Dionisi H, Rosenfield RB, Lee TTM, et al. Surgical and Clinical Reactivation for Elective Procedures during the COVID-19 Era: A Global Perspective. *J Minim Invasive Gynecol.* 2020; 27(5): 1188-95.
33. Leung K, Wu JT, Liu D, Leung GM. First-wave COVID-19 transmissibility and severity in China outside Hubei after control measures, and second-wave scenario planning: a modelling impact assessment. *Lancet.* 2020; 395(10233): 1382-93.
34. Xu S, Li Y. Beware of the second wave of COVID-19. *Lancet.* 2020; 395(10233): 1321-2.
35. Ross GL. Clinical characteristics and outcomes of patients undergoing surgeries during the incubation period of COVID-19 infection. What are the implications for the commencement of elective surgery? *EClinicalMedicine.* 2020; 23: 100385. doi: 10.1016/j.eclinm.2020.100385