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Contraception & covid - 19

Abstract

The COVID-19 disease caused by the new coronavirus SARS-CoV-2 was first identified in December 2019 in the city of Wuhan, the People's Republic of China, and within a few months it became a pandemic. It has been a global challenge that threatens public health and has led to the implementation of strict social isolation measures. As a consequence of the health emergency, there has been a significant reduction in healthcare activity and has jeopardized access to and continuity of contraceptive methods, thus exposing women to the risk of unintended pregnancies. Sexual and reproductive rights are essential and must always be guaranteed.

Keywords: COVID-19, contraception, hormonal contraception, family planning, venous thromboembolism

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Introduction

Since the first case reported in December last year, the 2019 coronavirus disease (COVID-19) has spread globally. According to data from the World Health Organization (WHO), as of August 1, 2020, there were 17,396,943 million people infected worldwide and more than 600,000 deaths.[1] The current pandemic caused by COVID-19 is a viral infection associated with a systemic inflammatory response. The clinical spectrum of this disease is very wide, from mild and nonspecific symptoms such as fever, odynophagia and dry cough, to severe pneumonia and acute respiratory distress syndrome (ARDS),[2] with the need for admission to an intensive care unit (ICU).

Increased levels of D-dimer have been established as a predictor of the development of ARDS,[3] just as the severity of the disease is correlated with an exaggerated immune response.[4] One of the most striking discoveries regarding the coronavirus infection is its possible association with the development of thrombosis, the classic syndrome of disseminated intravascular coagulation (DIC) and the subsequent consumption coagulopathy.[3] It was observed that patients with severe forms of COVID-19 whose symptoms rapidly escalate presented a clinical profile that coincided with Macrophage Activation Syndrome (MAS). This syndrome is characterized by uncontrolled T cell proliferation, excessive macrophage activation, and pro-inflammatory cytokine hypersecretion. In addition, pathological thrombin activation has been found in these patients with subsequent thrombotic episodes. Doctors Gauna and Bernava called this complex and particular situation "Thrombotic Immune Response Associated to Covid-19" (RITAC).[4] The incidence of venous thromboembolism (VTE) in patients with COVID-19 has not yet been established. According to the American Society of Hematology (ASH) database, the incidence of VTE in the general hospital ward is about 1.1% whilst it rises to 69% in patients admitted to the ICU.[5] As with other pathologies, those patients that present with a more severe form of the disease, especially if they present additional risk factors such as personal history of VTE, obesity, hypertension and/or old age, among others, have a higher risk of developing a thrombotic event compared to those patients with an asymptomatic or mild form of the disease.

It is yet unknown whether the risk of thromboembolic disease is higher in COVID-19 cases versus other critically ill patients. Regarding our speciality, we have posed the following questions: is there a link between gynecology and COVID-19? And if so, what implications does it have on our daily practice as gynecologists?

First of all, changes in sexuality and the discontinuation risk of different contraceptive methods (CAM) expose women to unintended pregnancies, leading to unsafe abortions or high-risk pregnancies, with increased maternal and infant morbimortality. Moreover, the possible thrombosis risk in hormonal contraception users with COVID-19 is a major concern for gynecologists. This hypothesis is based on scientific evidence that associates the use of hormonal therapies with a hypercoagulable state, which in this context could generate a synergistic effect and lead to a higher risk of thrombosis. COVID-19 has turned out to be an interdisciplinary entity that crosses all health agents in a transversal way, becoming a challenge for multiple specialties.

Impact on sexual and reproductive health

Article 25 of the Universal Declaration of Human Rights establishes the right to an adequate standard of living that ensures health and well-being for everyone, especially food, clothing, dwelling, health care and necessary social services.[6] Contraceptive and family planning services are essential components of people's overall health and thus must be guaranteed even in an emergency setting. Therefore, it has been imperative to ensure access to sexual and reproductive health benefits during coronavirus restrictions set in this pandemic (quarantine and social distancing measures). Several

international societies such as the Faculty of Sexual and Reproductive Health (FSRH), the WHO, the Spanish Contraception Society (SEC) and the International Federation of Gynecology and Obstetrics (FIGO) have published a series of recommendations as a guideline to support and safeguard sexual and reproductive health.[7-10]

a. Broaden the access to postpartum family planning services, particularly of long-acting reversible contraceptives (LARCs), understanding that prenatal care, delivery and aftercare may be the only opportunities women have to begin contraception.

b. Proactive promotion and provision of all family planning methods, ensuring that inputs are available.

c. Simplification of the processes to access CAM.

d. Implementation of telemedicine as a complement to improve information and access to contraception.

Recommendations on contraceptive methods during the health emergency due to the COVID-19 pandemic

Current users of contraceptive methods

For users of hormonal contraception without a COVID-19 diagnosis, the recommendation is to update the medical history and, if there are no variations, maintain the same prescription.[11] Switching to pills, rings or patches could be considered in the case of injectable contraception (combined or medroxyprogesterone acetate) given the higher risk of exposure to the virus whilst in close contact during the application.[12] Users of LARCs (long-term reversible methods) requiring device replacement deserve special attention. In the case of subdermal implant of etonogestrel, copper IUD and levonorgestrel 52 mg IUD (Mirena®), their use can be extended for one more year, ensuring their contraceptive efficacy. In the particular case of the levonorgestrel 13.5 mg IUD (Blusiri®), after 3 years of use, backup CAM should be indicated, such as a condom or gestagen-only pills (POP).[10] The insertion of the IUD in women after 40 years of age can be maintained until menopause.[13] (Table 1) In this pandemic context, the only indications for extracting LARCs are the desire for pregnancy, severe side effects and/or signs of infection.[10] If the patient requests the withdrawal of the contraceptive method, appropriate counseling must be performed beforehand and an alternative CAM must be defined.

As previously mentioned, COVID-19 has been linked to coagulopathies and thrombotic phenomena. Furthermore, patients hospitalized for COVID-19 have shown higher risk of VTE, especially those admitted to the ICU. Combined hormonal contraceptives induce biochemical changes that cause a hypercoagulable state. Both situations have a synergic effect that leads to an increased risk of thromboembolism. In patients with additional risk factors, anticoagulant therapy can improve prognosis and reduce morbidity and mortality.[14]

Table 1

Method	Duration	Special considerations
Copper IUD	can be extended for 1 more year	< 40 years is recommended to add POP or condom when expiration date is reached
		> 40 years do not need replacement
IUD - LNG 52 mg	can be extended for 1 more year (up to 6 years)	> 6 years of use, it is recommended to add POP or condoms until the in person consultation
		When IUD- LNG 52 mg is inserted in women > 45 years with contraceptive purposes, it can be maintained up to the age of 55
IUD - LNG 13.5 mg	3 years	add POP or condom when the expiration date is reached
Subdermal implant	can be extended for 1 more year (up to 4 years)	> 4 years of use it is recommended to add POP or condom when expiration date is reached

Combined hormonal contraception can be maintained in women diagnosed with COVID-19 who are users of combined hormonal contraception and are either in home isolation or admitted to a general ward with only mild symptoms without additional thrombotic risk factors, such as obesity, smoking, diabetes and hypertension, among others.[12] If severe respiratory symptoms, pneumonia and/or the additional thrombotic risk factors mentioned above appear, the recommendation is to rotate to POP.[15] An individualized assessment for the need of antithrombotic prophylaxis should be made based on clinical criteria, risk factors, and personal and family thrombotic disease history in outpatient management patients. There is currently no validated consensus on antithrombotic drug regimens. General recommendations are: encourage walking, avoid prolonged standing or sitting, change position every 30-60 min, exercise lower extremities and maintain adequate hydration.[14] In patients diagnosed with COVID-19 who require ICU hospitalization, combined hormonal contraception should be withdrawn and emergency contraception indicated if they had sexual intercourse without a condom in the previous 48 hours. In addition, thromboprophylaxis ought to be prescribed.[15]

Once the patient has recovered from COVID-19, if her contraceptive treatment has been withdrawn or changed, her original contraceptive method may be restored. In cases where thromboprophylaxis was needed, it should be continued for a minimum of seven days after hospital discharge or until the patient achieves complete mobilization.[15]

New users of contraceptive methods

Counseling through telemedicine is recommended for women who want to start contraception for the first time. Performing a complete medical history is mandatory, documenting personal and gynecologic-obstetric as well as family history, with special emphasis on history of thromboembolic disease and other risk factors such as smoking in women over 35 years of age, hypertension and any other medical condition that can contraindicate the use of the combined hormonal contraception.[10] Despite the fact that women can safely use combined

hormonal contraception, in the current pandemic context, it is advised to start treatment with gestagen-only pills.[12] If LARCs are the patient's first choice, each case must be evaluated individually, taking into account several factors such as the situation of the health-care system and the close contact with health professionals that will take place during the insertion.[12] If practicing the procedure is not feasible, a temporary backup method should be considered. Always remember and encourage the use of condoms as the only method for preventing sexually transmitted infections (STIs). Regarding emergency contraception, there are no contraindications for its use[10] (Figure 1).

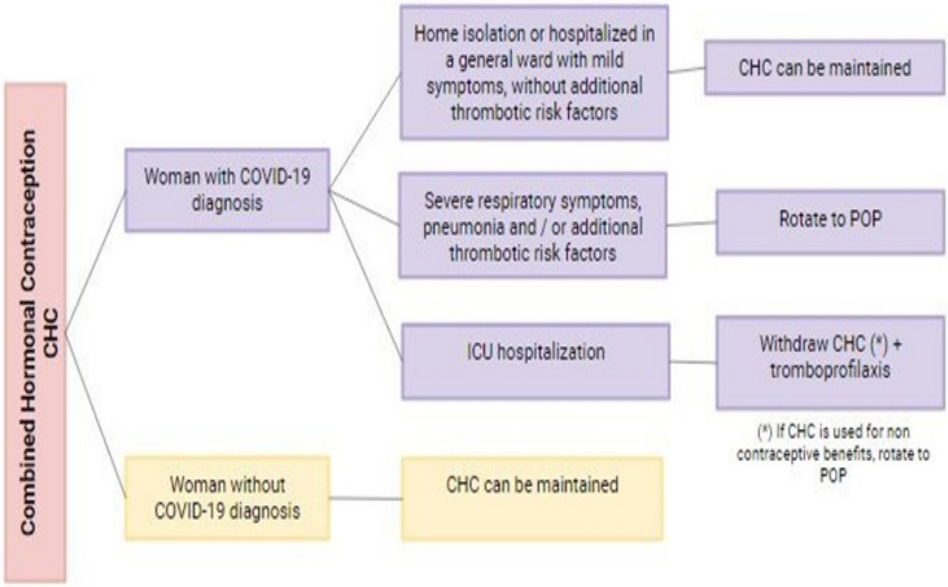

Figure 1 Adapted from AMAdA Opinion Committee; May 2020: Recommendations for the management of contraception during the COVID-19 pandemic.

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Conflicts of interest

Authors declares that there is no Conflict of interest.

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