

MODERN WAYS OF PRECONCEPTIONAL SUPPORT FOR ART CYCLES IN WOMEN WITH TUBAL INFERTILITY DURING COVID-19 PANDEMIC

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Tubal infertility is one of the main indications for in vitro fertilization (IVF). The cause of tubal infertility is also an important factor in IVF outcomes. In these cases, many factors influence IVF success, including the patient's age, the quality of ovarian stimulation, the quality and number of embryos transferred, and the appearance of the endometrial using ultrasound. Lack of preconceptional preparation has been associated with significantly higher reproductive risks, ranging from infertility to intrauterine structural defects and long-term illness during COVID-19 aggression. In this review, we focus on the reproductive risks associated with certain periconceptual supports, a critical step in determining fetal development and health due to the potential onset of a number of diseases in women with tubal infertility during COVID-19 Pandemic.

Infertility is a common public health problem around the world. These days, 9% of women of reproductive age worldwide, including nearly 1.5 million women in the United States, are infertile [1]. The burden of infertility is excessively higher among women in developing countries; in some regions of South and Central Asia, sub-Saharan Africa and North Africa, the Middle East and Eastern Europe, the infertility rate can reach 30% in women of reproductive age [2]. Failure to conceive not only creates a significant cost burden for patients and the health care system, but is also a major psychological stress for millions of couples [3]. In some parts of the world, especially in low- and middle-income countries where biological children are highly valued and expected of couples, involuntary infertility can lead to stigma, economic deprivation, social isolation and loss of status, social shame and humiliation, and in some cases of violence [4].

Female infertility can be attributed to a number of factors, which are usually classified as endocrine, vaginal, cervical, uterine, tubal, and pelvic-abdominal, and although estimates vary, approximately 15-30% of cases are still unexplained [5]. Further understanding of the causes of infertility is needed to alleviate this multifactorial burden on society.

To suspect infertility, a patient must have had a failed pregnancy after 12 months or more of regular unprotected intercourse in a woman under 35 years of age and 6 months without success in a woman 35 years or older. According to WHO estimates, 50–80 million women worldwide and 11.3% of married women suffer from infertility, and only 35% of them seek medical help [6]. Tubal sub fertility or infertility is ascribed to 30% of the etiology of infertility [7]. Tubal peritoneal infertility (TPI) is one of the most common causes of infertility in women of reproductive age. Tubal disease can include a proximal, distal, or whole tube and vary in severity. Pelvic inflammatory disease is the most common cause of tubal disease, accounting for over 50% of cases, and can affect the fallopian tubes in many locations [8].

In Uzbekistan on March 15, the National Health Agency announced a ban on all types of ART interventions. No protocols are being held at the moment. The key factor is precisely the organization of the teams: it is necessary to organize two teams, in case a member of one of the teams is diagnosed with COVID-19. We change brigades weekly, it is possible to alternate morning / evening shifts.

Posting information on ART therapy during a pandemic on information resources; remote communication with patients, including taking anamnesis; patients subscribe to a questionnaire regarding their health and epidemiological contacts, especially with risk regions; patients should wait outside the clinic (for example in a car); only 5 people can



be simultaneously in the waiting area (vacuum mode); the entrance of patients to the clinic is possible only upon a call from the registrar and only after disinfection of hands and putting on a mask; the check-in counter is protected by plexiglass glass; men enter only to sign documents and donate sperm; disinfection is carried out after each patient.

If COVID-19 is detected in the patient, the puncture is canceled before the follicle puncture. The main thing is to avoid risks to the patient and staff. If a decision is made to continue treatment, then we treat patients with hepatitis B / C according to the protocol; manipulations - at the end of the working day; we work as usual in masks and gloves; embryo transfer is not performed; incubation, ideally in a bench-top or time-lapse incubator (Geri); disinfection after incubation; vitrification of cells in a closed automated system (Gavi); the use of a separate Dewar, but personal opinion is not necessary (a closed system does not increase the risk of contamination) Arguments in favor of reviving the work of IVF clinics: Prolonged cancellation of IVF cycles can negatively affect the demographic situation; infertility treatment is a priority; the risks of contracting coronavirus for "age" patients are much less than being left without children; there is still no evidence of the possibility of transmission of coronavirus with gametes and embryos; no evidence of special complications from coronavirus during pregnancy.

The resumption of work is planned to be carried out according to the recommendations of ESHRE. Employees work in teams for 2 weeks and before starting work in a 2-week shift, they are tested for IgM and IgG, thus. we are sure that employees were quarantined all this time before starting work.

In the clinic, the work algorithm is based on testing for COVID-19: IVI conducts a test for IgM and IgG of staff (starting work, if they suspect COVID-19 infection) and patients

During the day, we disinfect the equipment after each use with a soapy solution. At the end of the day, disinfection with solutions based on ammonium, ethanol 70%, H₂O₂ or NaClO.

For operating rooms: masks + surgical mask on top all the time; gloves and disposable gowns are changed after each procedure; limit the number of people to 3 people; the embryologist is not included in the operating room; Schedule patient visits every 45 minutes cleaning after each procedure.

Uzbekistan expects the release of the national manual on ART in the conditions pandemic, it is possible that this guidance will be based on recommendations ESHRE. The key point will also be the release of regional orders, which may differ from national guidelines and in a different way regulate the work of ART clinics.

We predict / do not exclude the second wave of the pandemic, accordingly informed consent should be considered for the immediate cancellation of protocols in case of force majeure.

An important factor is also the fears of anesthesiologists who are not ready to administer anesthesia to patients with COVID-19 (suspected COVID-19) without a preliminary assessment of C-reactive protein and leukocyte count, and in case of adverse test results - chest X-ray. So at the moment, new ART cycles have been suspended; the current stimulation cycles are completed, followed by freeze all; online consultation of patients is carried out in established systems of distance medicine, as well as through instant messengers and social networks. Processing a semen sample in gradients followed by washing; to date, there is no convincing data on receptors for COVID-19 on the membranes of gametes and embryos; ICSI is performed strictly in the presence of clinical indications (for example, male factor); the freeze-all strategy is applied.

Conclusion. The expected educational result of our work includes the assimilation of modern methods of diagnosing gynecological diseases, a multidisciplinary approach to the management of married couples planning a pregnancy, and the choice of individual management tactics, taking into account clinical recommendations during a Pandemic. We decided that analysis of published series is necessary to assess the consistency of published results and to enable patients to obtain more accurate information about their IVF prognosis in the presence of tuboperitoneal infertility during COVID-19 aggression.