

ART and pregnancy in COVID19

Dr S. Hosseini

SBMU

Autumn 2020

introduction

- The COVID-19 pandemic presents a unique global challenge on a scale not previously seen
- In the earliest stages of the pandemic, the (ASRM) and the (ESHRE), independently recommended discontinuation of reproductive care except for the most urgent cases

**that infertility is a disease, and
infertility care is not elective.**

- The impact of delay on patient prognosis due to medical factors, such as age, ovarian reserve or endometriosis.
- The number of patient visits required (e.g. treatments that are associated with the fewest visits may be prioritized first).
- The impact of treatment delay on the mental and emotional well-being of patients.
- The impact of delay on patient ability to pursue or access treatment due to insurance coverage or employment status

Assisted reproduction and COVID-19: a joint statement of ASRM, ESHRE and IFFS^{†,‡}

**Anna Veiga¹, Luca Gianaroli², Steve Ory ³, Marcos Horton⁴,
Eve Feinberg⁵, and Alan Penzias⁵**

¹The European Society of Human Reproduction and Embryology (ESHRE), Spain ²ESHRE, Italy ³The International Federations of Fertility Societies (IFFS), USA ⁴IFFS, Argentina ⁵The American Society of Reproductive Medicine (ASRM), USA

Submitted on June 1, 2020; resubmitted on June 1, 2020; editorial decision on June 2, 2020

- Monitor local conditions, including prevalence of disease, status of government or state regulations, and availability of resources
- Counsel patients about all options, including deferring evaluation and treatment

- **High-risk patients** (e.g. diabetes, hypertension, using immunosuppressant therapy, past transplant patients, lung, liver or renal disease) should not start ART treatment until it is deemed safe to do so by relevant healthcare professionals and/or local health authorities.
- All patients should be offered a choice to proceed with or postpone their ART treatment.

In both cases patient preference should be clearly documented

Delay in IVF treatment up to 180 days does not affect pregnancy outcomes in women with diminished ovarian reserve

Phillip A. Romanski*, **Pietro Bortoletto**, **Zev Rosenwaks**, and **Glenn L. Schattman**

Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine, Weill Cornell Medical College, New York, NY, USA

*Correspondence address. Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine, Weill Cornell Medical College, 1305 York Avenue, New York, NY 10021, USA. Tel: 813-785-0773; E-mail: par9114@med.cornell.edu

Submitted on April 29, 2020; resubmitted on May 11, 2020; editorial decision on May 13, 2020

- The Society for Assisted Reproductive Technology (SART)
- the College of Reproductive Biology (CRB)
- the Society for Reproductive Biologists and Technologists (SRBT)

- only symptom-free technicians be present in the clinic
- changing scrubs upon entrance to the laboratory, consistently using PPE
- discouraging sharing pipettes and pens
- dividing laboratory staff into non-overlapping teams
- disinfecting all surfaces at the beginning of the shift
- Considering remote options for non bench activity
- reviewing precautions and labeling practices in individual laboratories to minimize risk of cross-contamination

Safe ART services during the third phase of the COVID-19 pandemic

Guidance from the ESHRE COVID-19 Working Group

Date of publication: 14/10/2020

Last update: 14/10/2020



The two-step approach to ART service maintenance

STEP 1		STEP 2
14-day COVID-19 case notification rate per 100,000	Impact on ART services	Recommended mitigation measures
No cases reported	Insignificant	<ul style="list-style-type: none"> • Continue as per routine • <i>Follow regional and country-specific guidance</i>
<20	Minor	<ul style="list-style-type: none"> • Triage recommended for all patients • SARS-CoV-2 testing for triage-positive patients • <i>Follow regional and country-specific guidance</i>
20.0-59.9	Moderate	<ul style="list-style-type: none"> • Routine triage for patients and staff, and SARS-CoV-2 testing for triage-positive patients/staff • Routine implementation of the Code of Conduct for staff and patients • <i>Follow regional and country-specific guidance</i>
60.0-119.9	Major	<ul style="list-style-type: none"> • Routine triage for patients and staff, and SARS-CoV-2 testing for triage-positive patients/staff • Routine implementation of the Code of Conduct for staff and patients • Remote consultation and counselling (tele-medicine) • Reduction of visits to the ART clinic • Routine use of PPE for staff • Face mask recommended for patients • No accompanying persons allowed • <i>Follow regional and country-specific guidance</i>
≥120.0	Critical	<ul style="list-style-type: none"> • Routine implementation of the Code of Conduct for staff and patients • SARS-CoV-2 testing of all patients and staff • Remote medical advice and counselling (tele-medicine) • Reduced clinic visits • Staff: routine use of PPE • Patients: face masks recommended • No accompanying persons allowed • Laboratory: freeze-all policy to be considered • <i>Follow regional and country-specific guidance</i>



AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE (ASRM)
PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS
DURING THE CORONAVIRUS (COVID-19) PANDEMIC

UPDATE No. 9 (October 6, 2020 through November 9, 2020)

- Infertility treatment is a special circumstance that may benefit from serial antigen testing. Patients interface with the healthcare system frequently and have multiple points of contact.
- there are limited data on the effect of COVID-19 on pregnancy, the fetus, and the child. Therefore, it may be reasonable to advocate for enhanced testing strategies in this population, a position that has been strongly advocated by leading epidemiologists

- Frequent, inexpensive, and rapid tests for high-risk, symptomatic, and asymptomatic persons, followed by confirmatory nucleic acid testing for those that test positive, is the best way to contain COVID-19 spread
- testing should not be used as a substitute for recognized mitigation strategies, such as masking, frequent hand washing, and physical distancing. The limitations of frequent testing must be recognized

Table 1 – IVF protocol modifications pre- and post- COVID-19.

IVF Protocol Modifications Pre-COVID19	Post-COVID-19
In-person consultations	Telemedicine consultations
In-person meetings with nurses, coordinators	Virtual meetings with nurses, coordinators
Unrestricted travel with no personal protective equipment	All staff were issued and encouraged to wear masks on their way to and from the center, all patients were issued masks to wear at the center if they didn't already have one
Hepatitis B, C, HIV, and syphilis tests prior to stimulation	Consider addition of SARS CoV-2 testing prior to start of stimulation (if positive, do not start)
Multiple visits during stimulation (typically 5-7 visits before egg retrieval)	Space out visits during stimulation where appropriate (3-4 visits before egg retrieval). Temperature checks at each visit (patients and staff).
Crowded waiting rooms	Patients immediately roomed after checking in. Vital signs and blood draw done while in the exam room. Seating and location of staff were changed to maintain >6 foot distancing wherever possible.
Rapid turn-over of ultrasound examination room	Empty waiting room, thoroughly wipe down surfaces, longer interval between procedures
Partner encouraged to accompany patient at visits, egg retrieval, and transfer	No partners or visitors (encourage use of video-telephone products)
Sperm production on site in small collection room	Off-site sperm production
Signed consent forms – common pens	Electronic consent forms – clean pens available if need to sign forms

Table. Risk assessment and mitigation for reproductive care procedures and activities

Procedure/Activity	Potential Risk	Mask Type Required for Staff	Other PPE Required for Staff	PPE Required for Patients
Clinic Entry Screening	Droplet	Medical Grade	Gloves	Cloth Mask
Patient Registration	Droplet	Cloth Mask	---	Cloth Mask
Vital Sign Measurement	Droplet	Medical Grade	Gloves	Cloth Mask
In Office Consultation	Droplet	Cloth Mask	---	Cloth Mask
Phlebotomy	Droplet, Splash, Needle Stick	Medical Grade	Gloves	Cloth Mask
Ultrasound	Droplet	Medical Grade	Gloves	Cloth Mask
Saline Infusion Sonogram	Droplet, Splash	Medical Grade	Gloves	Cloth Mask
Hysterosalpingogram	Droplet, Splash	Medical Grade	Gloves	Cloth Mask
Office Hysteroscopy	Droplet, Splash	Medical Grade	Gloves	Cloth Mask
Endometrial Biopsy	Droplet, Splash	Medical Grade	Gloves	Cloth Mask
Specimen Handling (Blood, Semen, Follicular Fluid)	Splash	Medical Grade	Gloves	N/A
Intrauterine Insemination	Droplet	Medical Grade	Gloves	Cloth Mask
Embryo Transfer	Droplet	Medical Grade	Gloves	Cloth Mask
IV Line Insertion	Droplet, Splash, Needle Stick	Medical Grade	Gloves	Cloth mask
Pre-Op Holding Area	Droplet	Medical Grade	Gloves	Medical Grade
Airway Management	Droplet, Aerosolization	N95 or equivalent	Face Shield, Gloves	Medical Grade
Oocyte Retrieval	Droplet, Splash, Needle Stick	Medical Grade	Gloves	Medical Grade
Operative Hysteroscopy	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves, Gown	Medical Grade
Operative Laparoscopy	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves, Gown	N/A
Open Reproductive Surgery	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves, Gown	N/A
Post Anesthesia Care Unit	Droplet, Splash	Medical Grade	Gloves	Medical grade

General Information Regarding Pregnant Individuals and COVID-19 (November 6, 2020)(ACOG ,SMFM)

- Available data suggest that symptomatic pregnant women with COVID-19 are at increased risk of more severe illness compared with nonpregnant peers
- Infants born to mothers with known or suspected COVID-19 are COVID-19 persons under investigation and should be tested for SARS-CoV-2 RNA by reverse transcription polymerase chain reaction (RT-PCR) at approximately 24 hours of age

- CDC now includes pregnant women in its “increased risk” category for COVID-19 illness
- small but significant risk of ICU admissions, mechanical ventilation, and death reported in pregnant women with symptomatic COVID-19 infection, when compared with symptomatic non-pregnant women
- Pregnant patients with comorbidities such as obesity and gestational diabetes may be at an even higher risk of severe illness consistent with the general population with similar comorbidities



ELSEVIER

Contents lists available at [ScienceDirect](#)

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb



Full length article

First follow-up of art pregnancies in the context of the COVID-19 outbreak

Anne Mayeur^{a,*}, Olivier Binois^a, Vanessa Gallot^{a,b}, Laetitia Hesters^a, Alexandra Benoit^b, Anne Oppenheimer^b, Marion Presse^b, Faycal Zeghari^b, Jonas Benguigui^b, Michael Grynberg^b, Nelly Frydman^{a,1}, Charlotte Sonigo^{b,1}

^a Reproductive Biology Unit CECOS, Paris-Saclay University, Antoine Béclère Hospital, APHP, Clamart 92140, France

^b Department of Reproductive Medicine and Fertility Preservation, Paris-Saclay University, Antoine Béclère Hospital, APHP, Clamart 92140, France



Study Design

- This is a single centre, retrospective study from December 2019 to March 2020 based on a phone call interview using a specific questionnaire sheet specially developed for this study.
- Questionnaires from 104 pregnant women were completed and descriptive data are then analyzed

Results

- Women with ongoing pregnancies (n = 88) did not change their physician visits.
- The COVID-19 outbreak has created no or few additional stresses for 77 % of pregnant women since the lockdown started.
- report a miscarriage rate of 14.4 % (n = 15) and documented 10 patients (11.3 %) who had symptoms related to COVID-19.
- No severe symptoms and no hospitalization in intensive care unit were identified