

COVID-19 POSITIVE ANTENATAL PATIENTS IN OBSTETRICS AND GYNEA UNIT, PESHAWAR

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ABSTRACT:

OBJECTIVES:

The study aimed to determine the frequency of COVID-19 positive antenatal patients admitted in Obstetrics & Gynecology unit Hayatabad Medical Complex Peshawar with the concerns that pregnant women may be more susceptible to COVID-19 as they may be more vulnerable to respiratory infection.

METHODOLOGY:

This was a descriptive cross-sectional study conducted at Obstetrics & Gynecology units Hayatabad Medical Complex Peshawar from May 12th, 2020, to November 29th, 2020, screening and testing of patients admitted for childbirth was in HMC. Screening consisted of questions related to travel, contacts, and symptoms of COVID-19. All patients without a prior diagnosis of COVID-19 underwent SARS-CoV-2 polymerase chain reaction (PCR) testing of nasopharyngeal swabs, with rapid testing available. Patients scheduled for cesarean birth were screened and tested at preoperative visits

RESULTS:

One hundred eighty-two patients presenting for antenatal visits were screened; 6.5% (12 out of 182) were previously diagnosed with COVID-19. The remaining 170 patients were tested at admission, and 17.6% (30 out of 170) tested positive for SARS-CoV-2. Twenty-two of the 30 who tested positive for SARS-CoV-2 (73.3%) were asymptomatic. The overall prevalence of positive test results among asymptomatic patients was 14.1% (22 out of 156). The prevalence of positive test results among asymptomatic patients increased from 1.29% (2 out of 155).

CONCLUSION:

The evidence on this novel infection is changing almost daily, although it will likely be many months before, we can determine the true impact it will have on both maternal and fetal well-being. In the interim, our primary responsibility is to ensure all women have access to safe maternity services.

KEYWORDS: *Asymptomatic, COVID-19 Positive, Antenatal Patients, Obstetrics & Gynecology, Infection*

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INTRODUCTION:

Pneumonia of unknown cause was identified in Wuhan, China and was first reported to the WHO Country Office in China on December 31, 2019. On February 11th 2020, WHO announced a name for the new coronavirus disease: COVID-19¹. This has rapidly escalated and has become the International Public Health Emergency, and by May 7th 2020, there were 3679499 confirmed cases and 254199 deaths in 215 countries². The evidence to date would suggest that they are no more vulnerable to this particular pathogen than the general population³⁻⁷. However, we are aware that there are vulnerable groups within both the pregnant and non-pregnant populations and clinicians should be cognizant of these high-risk groups and manage them accordingly. Adults with pre-existing diabetes have been identified as being more vulnerable to the severe effects of COVID-19 infection⁸. Many of the guideline documents published to date highlight some of the at-risk groups within the obstetric population⁶. Specific comorbidities to assess women include the following: hypertension, diabetes, asthma, HIV, chronic heart disease, chronic liver disease, chronic lung disease, chronic kidney disease, blood dyscrasia, those with solid organ transplants, malignancies and people on immunosuppressive medications⁶. It is recommended that all pregnant women observe social distancing and follow self-isolation guidance to prevent exposure to COVID-19 and practice good hand hygiene³. The International Federation of Gynecology and Obstetrics currently recommends that during the course of the pandemic, the general principle should be to minimize in-person office visits and if

practical and appropriate, consider appointments via telephone or videoconferencing⁵. Women with symptoms of COVID-19 appointments should be delayed during the period of self-quarantine. If symptoms persist, they should call and make an appointment for testing and/or hospitalization. Maternity units should consider additional measures, and these should include limiting the number of support persons/visitors with patients for outpatient and inpatient visits, including labor and delivery areas³. For pregnant women who have recovered from the virus, close follow-up is recommended with a regular sonographer assessment of fetal growth and well-being as data is lacking on the potential development of intrauterine growth restriction (IUGR) and placental insufficiency^{8,10}. For women who are either suspected or confirmed COVID-19 positive, appropriate care must be taken at the time of labor and delivery. As mentioned above neither cesarean nor vaginal delivery confers any additional risks to either the mother or the fetus, or the mode of delivery should be determined on an individualized basis. Adherence to infection precautions is critical and should be planned at a local level. The rationale of this study was to figure out the incidence of COVID-19 in pregnant patients. The objective of this article is to review the current data concerning how COVID-19 affects pregnant women, the information to date on treatment options, its psychological impact and the wider effect on healthcare services and resources.

METHODOLOGY:

This was a descriptive cross-sectional study conducted at Obstetrics & Gynecology units Hayatabad Medical Complex Peshawar from May 12th, 2020, to November 29th, 2020, screening and testing of patients admitted for childbirth was in HMC. This study was conducted after the approval from the hospital ethical committee. All the pregnant women fulfilling the inclusion criteria were enrolled in the study through Out-Patient Department (OPD) and Obstetrics & Gynecology Department. The patients were debriefed, and written informed consent was taken. Screening consisted of questions related to travel, contacts, and symptoms of COVID-19. All patients without a prior diagnosis of

COVID-19 underwent SARS-CoV-2 polymerase chain reaction (PCR) testing of nasopharyngeal swabs, with rapid testing available. Patients scheduled for cesarean birth were screened and tested at preoperative visits. Hospital policies recommended universal mask use on clinical units by clinicians, patients, and support persons and limited each patient to one visitor for childbirth. For patients with symptoms of COVID-19, the N95 respirators and appropriate personal protective equipment (PPE) until results returned, continuing use for patients with positive test results. For patients without symptoms of COVID-19, clinicians followed usual precautions including wearing masks. For the second stage of labor and cesarean or

vaginal birth, clinicians wore full PPE and N95 mask respirators for patients without test results or with positive results. Excluded from universal testing were patients already diagnosed with COVID-19 and patients not admitted for childbirth. The numbers of positive PCR tests in patients with and without symptoms of COVID-19 were assessed over time.

RESULTS:

One hundred eighty-two (182) patients presenting for antenatal visits were screened; 6.5% (12 out of 182) were previously diagnosed with COVID-19. The remaining 170 patients were tested at admission.

Table 1: Showing characteristics of the antenatal patients

	Characteristics	SARS-CoV-2 PCR Results	
		Positive (n=30)	Negative (n=140)
Age	<30	14 (46.6%)	56 (40%)
	30-34	10 (33.3%)	45 (32.1%)
	>35	06 (20%)	39 (27.8%)
Nulliparity		16 (53.3)	123 (44.2)
Gestation <37 Week at Birth		-	62 (44.2%)
Apgar Score	<7 At 1 Min	-	40 (28.5%)
	<7 At 5 Min	-	12 (8.5%)
Cesarean Delivery		10 (33.3%)	40 (28.5%)

Table 2: Screening Characteristics of SARS-CoV-2 Antenatal Patients

Screening Characteristics	SARS-CoV-2 PCR RESULT	
Asymptomatic	Positive	2 (0.5%)
	Negative	153 (96.7%)
Symptomatic	Positive	5 (1.4%)
	Negative	5 (1.4%)

DISCUSSION:

Much of the data available thus far is in the form of case studies, case series and observational studies. With this novel condition, obstetricians and international obstetric bodies sought to determine in a short time the impact this disease would have on pregnant women, if parturient were at a higher risk of morbidity and mortality and what effect, if any, this disease would have on the fetus. Leading obstetric organizations have responded with a series of guidance documents to aid clinicians to navigate through this unknown landscape, including guidelines from the International Federation

of Gynecology and Obstetrics (FIGO)², the Royal College of Obstetricians and Gynecologists, UK (RCOG)³, and the American College of Obstetricians and Gynecologists (ACOG)^{11,13}. As this is a new infection, little is known about COVID-19, particularly related to its effect on pregnant women and infants, and there is currently no definitive evidence-based guidance specific to pregnant women regarding the evaluation or management of COVID^{14, 15}. The Centers for Disease Control and Prevention (CDC) has stated, based on the information currently available, that pregnant women seem to have the same risk as adults who

are not pregnant¹⁶. This study aims to review the current data in relation to how COVID-19 affects pregnant women, the information to date on treatment options, its psychological impact and its wider effect on healthcare services and resources. While some studies have raised concerns that pregnant women may be more susceptible to COVID-19 as in general, they may be more vulnerable to respiratory infection²² the evidence to date would suggest that they are no more vulnerable to this particular pathogen than the general population¹⁷. These findings suggest a low (<3%) prevalence of positive SARS-CoV-2 test results among asymptomatic patients who are pregnant¹⁸. The increasing prevalence of positive SARS-CoV-2 test results in the asymptomatic population, while the prevalence of symptomatic infections decreased, may indicate that universal testing identifies patients in a convalescent period, in addition to those with subclinical active infection¹⁹. Although performed in a mixed community and academic hospital settings, limitations of the findings include a short duration and a single geographic region. Approaches to care that balance screening and testing of patients combined with a rationalized approach to the use of PPE should be considered for obstetric units²⁰.

CONCLUSION:

In the interim, our primary responsibility is to ensure all women have access to safe maternity services. These include remaining up to date with the evidence for the treatment of COVID-19 in the pregnant population and ensure strict infection control measures to stem the spread of disease within our units. The doctors should be aware of those that are potentially vulnerable during this time, both patients and colleagues, and must ensure adequate supports are available to them during these uncertain times.

LIMITATIONS:

The results of this study were not generalizable because only one hospital of Peshawar was selected for the data collection.

CONFLICT OF INTEREST: None

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