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MANAGEMENT OF PREGNANT WOMEN, IN LABOR AND POSTPARTUM WOMEN WITH CORONAVIRUS (COVID-19) INFECTION

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Abstract:

Sixty-two patients were collected from different Hospitals in Iraq, where the research highlights management of pregnant women in labor and postpartum women with coronavirus infection (COVID-19).
Where the demographic information of the patients was collected, where x-ray methods and diagnostic methods (simple radiography and computerized tomography of the chest organs) were used. Mean value and slandered division to the age of the patients were found, and it was 34.816 ± 2.57 With 14 patient, that is, form of 23.3%, and the following conclusion has been reached so far, there is no scientific evidence of an increased vulnerability of pregnant women to complications related to COVID-19 infection, and One of the most important characteristics of this virus is its rapid global spread, and in most cases, it results in a mild respiratory infection, and In addition, no significant differences were found with other perinatal outcomes in neonates For COVID-19 neonates, 50% of cases are asymptomatic

Keywords: Pregnant, COVID-19, asymptomatic, MERS, patients.

INTRODUCTION

Data released during the summer of 2021 shows that pregnancy is a risk factor and can lead to maternal complications from COVID-19 infection compared to non-pregnant women in the same setting. However, the absolute risk is small. Consequences such as an increase in the number of miscarriages, obstetric complications, or fetal abnormalities due to the coronavirus have not been reported.

With regard to maternal complications, most cases of complicated pneumonia occurred in pregnant women who were in the third trimester of pregnancy or in the postpartum period, i.e., several weeks after delivery. COVID-19 infection in the first and second trimesters of pregnancy is associated with some complications [1,2,3,4]. However, due to complications affecting the mother (particularly in the third trimester of pregnancy), the incidence of premature infants has increased [5].

In the case of transmission of MERS-CoV to a child, some cases of intrauterine or perinatal transmission of COVID-19 have been reported, but this is very rare, and MERS-CoV does not appear to be associated with birth defects. In rare cases, a child with MERS-CoV has been described in Within a few days after birth, which in most cases was accompanied by mild symptoms [6,7].

Research is still ongoing, so pregnant women should continue to take appropriate precautions to protect against the effects of the coronavirus and seek medical attention if they develop a fever, cough, shortness of breath, or general malaise [8].

The development of complications, which is a major case in pregnant women, such as pneumonia, but in one case, which is the lack of an immune system, and in the case of elderly women, but to this day, no

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concrete evidence has been obtained indicating or referring to the major complications that affect the pregnant girl in a way More when compared to the control group [9]

One of the largest studies examining the outcome of Covid-19 during pregnancy to date provided data on more than 2,100 pregnant women from 18 countries [10]. Pregnant women with Covid-19 endure the same pregnancy and coronavirus infection much worse, complicating one another increases the risk of maternal mortality by an order of magnitude [11].

However, the authors of the work themselves urge not to panic about this, not to draw far-reaching conclusions, and not to make hasty decisions. For example, not to postpone a planned pregnancy, and most importantly, not to interrupt a pregnancy that has already begun [12].

However, Professor Papageorgiou notes that when a pregnant woman is infected with the Covid-19 virus, the risk of developing a severe course of infection increases. Not least because during pregnancy, physiological changes occur in the body of the expectant mother, which leads to the inhibition of the immune response - in order to prevent the rejection of the fetus, which is "still a half-foreign implant" [13].

In the second half of pregnancy, when the size of the fetus increases, the pressure of the uterus on the diaphragm increases, which makes the mother's breathing shallower. The risk of hypoxia increases significantly if viral damage to the lungs is also superimposed on this natural process [14,15].

MATERIAL AND METHOD

Patient sample

Sixty-two pregnant women patients were collected in different Hospitals in Iraq, where the research aimed to investigate and manage pregnant women in labor and postpartum women infection with coronavirus (COVID-19).

Study design

Screening of pregnant women with COVID-19 is no different from screening of adult patients.

With COVID-19, if necessary, use of x-ray methods Diagnostic methods (simple radiography and computed tomography of the chest organs) should be used to protect the fetus from radiation. In addition, it is necessary to obtain the informed consent of the patient for computed tomography, and ultrasound examination is used for the lungs as a diagnostic method.

Physical examination

- External obstetric examination - Abdominal examination
- Palpation of the uterus, measurement of abdominal circumference and fundal height, estimation of heart rate Fetus.
- Determine the patient's condition
- ECG, pulse oximetry, echocardiography.
- Ultrasound examination of the lungs.
- X-rays and computed tomography of organs
- chest cavity (according to the methods of protecting the fetus from radiation exposure)
- ECG, fetal ultrasound, Doppler study according to the period of pregnancy.

Study period

After collecting medical approvals from the administration, patients were collected for a period of one year, from 14-7-2020 to 1-5-2021.

Aim of research

Management of pregnant women, in labor and postpartum women with coronavirus infection (COVID-19)

Statistical analysis

The data and demographic information collected from the hospital were analyzed based on the statistical analysis program SPSS-SOFT 25, Where several new techniques were used in the statistical analysis program, and as an example, the accuracy of repeated ages was determined in the data, in addition to that, the value of P-value was determined in the results.

Study period

The study period, during which data were collected from the hospital, was determined from 11-2- 2020 – 1-1- 2021, as this period included the collection of demographic information about patients and the study of complications.

RESULTS

Sixty-two patients, pregnant women, were collected from different Hospitals in Iraq; the statistical analysis was relied on to know the distribution of patients based on ages, as shown in the figure below

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Table 1 – distribution of patients according to age (years)

P					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30.00	3	4.8	5.0	5.0
	31.00	3	4.8	5.0	10.0
	32.00	4	6.5	6.7	16.7
	33.00	14	22.6	23.3	40.0
	34.00	5	8.1	8.3	48.3
	35.00	6	9.7	10.0	58.3
	36.00	5	8.1	8.3	66.7
	37.00	8	12.9	13.3	80.0
	38.00	8	12.9	13.3	93.3
	39.00	4	6.5	6.7	100.0
	Total	60	96.8	100.0	
Total		60	100.0		

Table 2- Descriptive Statistics of patients

Descriptive Statistics					
T	N	Minimum	Maximum	Mean	Std. Deviation
p	60	30.00	39.00	34.8167	2.57426

Figure 1- Previous female illness

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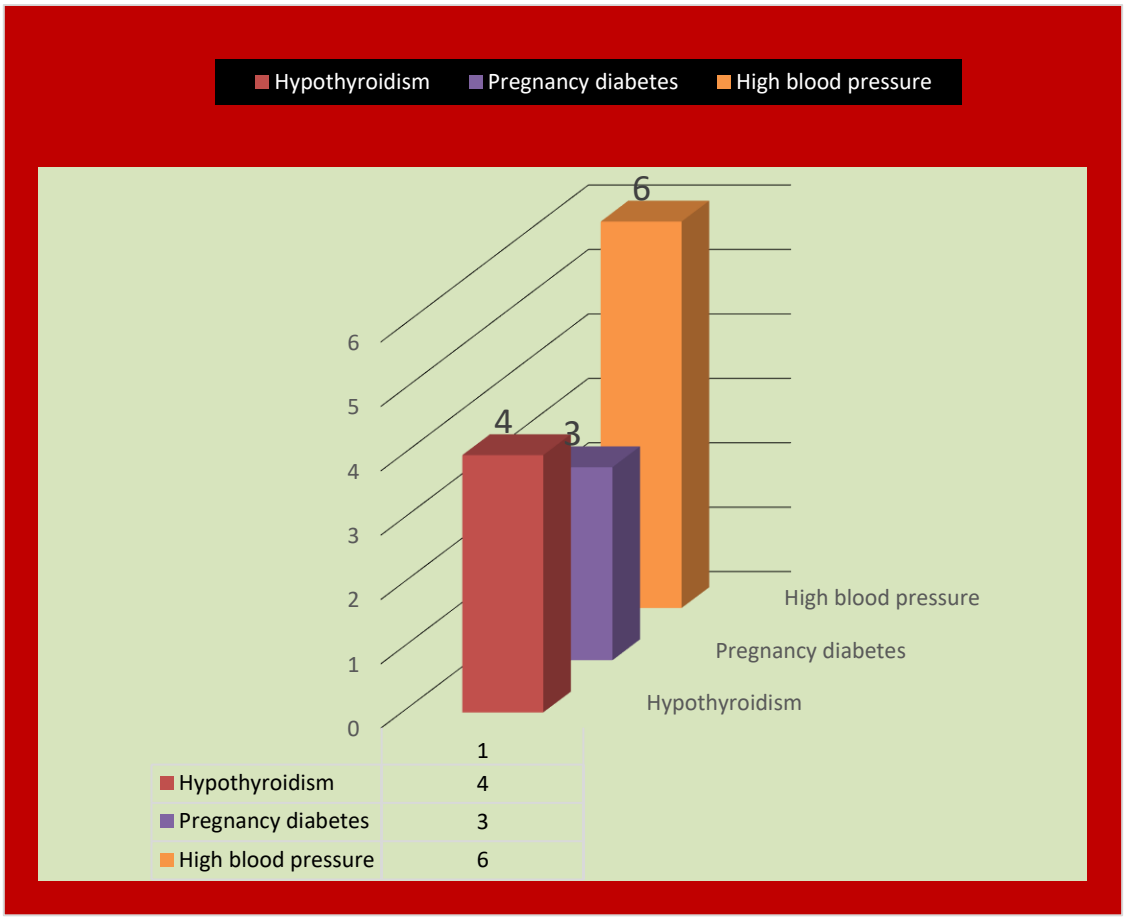

Table 3- general demographic of results

T	N
spontaneous onset of labor	40
Induced	22
Induction RPM > 18 hours (Premature rupture of membranes)	15
COVID-19	47
Complications during stretching	
There are no symptoms	50

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cardiotocographic record	7
Labor completion Caesarean	5
Isolate	
Isolate newborn (yes)	45
Isolate newborn(no)	17
reason	
Isolate reason (covid)	47
Isolate reason (other)	15
Postpartum complications	
Presence of visible symptoms in the postpartum period like bleeding	18
No symptoms	44

Figure 2 - C-reactive protein for women

T	N	P %
Before birth	2	3.2
During birth	3	4.8
After birth	4	5.1

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Figure 3- Desire to breastfeed

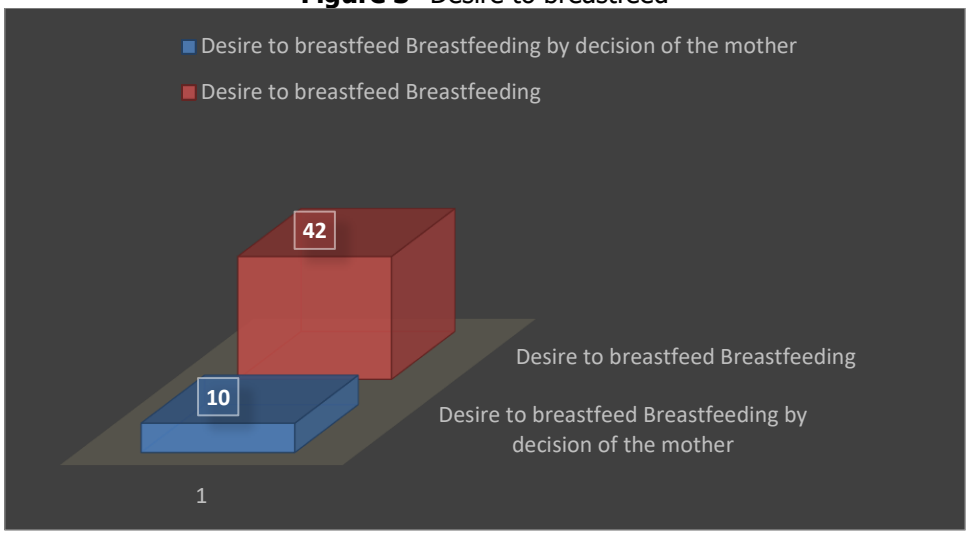
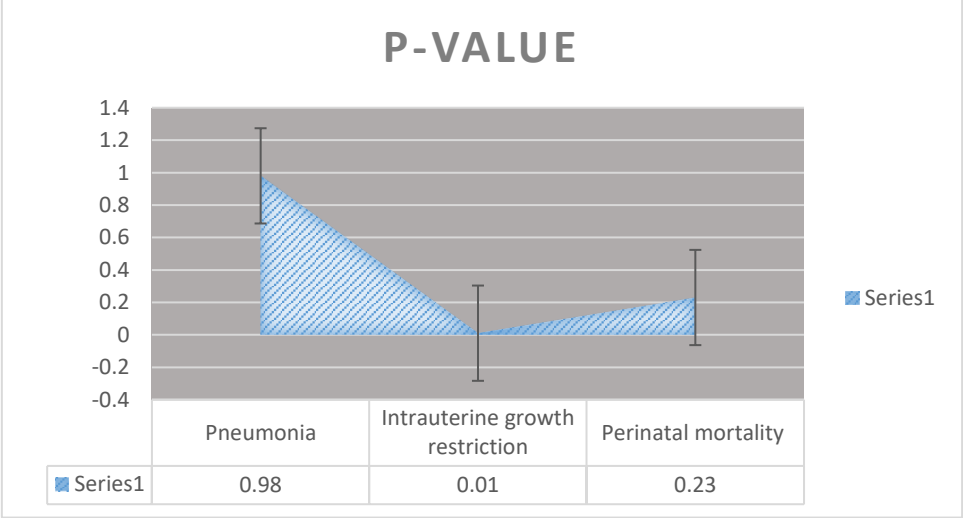


Table 4 - Perinatal impact of COVID-19

T	N
Pneumonia	3
Intrauterine growth restriction	5
Perinatal mortality	2

Figure 4- P-value



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DISCUSSION

The 62 patients were collected from different Hospitals in Iraq, where all demographic information was analyzed. Through the statistical analysis, the true value and the standard regression to the age of the patients were found, and it was 34.816 ± 2.57. With a number of 14, that is, with a ratio of 23.3, as shown in Table 1. The presence of concomitant diseases was also confirmed. When examining patients, it was found that some diseases were present, including high blood pressure, which was represented in 6 patients, and gestational diabetes (3), in addition to the thyroid gland in 4 patients, as shown in Figure 1.

Another study was found related to the effect of COVID 19 on pregnant women and labor, and that the identification through this study of the negative aspects that affect the virus on pregnant women, and the results of this study summarized that newborn have a high rate of severe neonatal morbidity in the peripheral period if compared with newborns without diagnosis.

This study indicates a consistent association between pregnant women with COVID-19 and higher rates of adverse outcomes, including maternal mortality, preeclampsia, and preterm birth compared to pregnant women without a COVID-19 diagnosis."

Women were significantly more likely to have pre-eclampsia, a medical condition that leads to high blood pressure. 59% were more likely to be born prematurely and would require newborns to spend time in neonatal intensive care units.

The presence of pneumonia with criteria of severity is associated with higher maternal mortality and adverse perinatal outcomes, requiring multimodal treatment that includes fluid therapy, oxygen therapy, and ventilator support, among others 5, The severity can be determined using the American Society of Infectious Diseases/American Thoracic Society criteria. And through the use of PCR, all the required results are obtained, and the clinical manifestations of the patients are known, in addition to the duration of the development of pneumonia.

However, according to the latest recommendations in areas with high rates of COVID-19 virus infection, suspected cases of pneumonia can be diagnosed by chest X-ray since CRP has a false negative rate of 30%. On the other hand, rapid tests have been proposed and used to improve the detection time of SARS-CoV-2 infection and reduce costs from RT-PCR62. However, these methods still have low sensitivity, so their large-scale application and validation studies will be necessary.

And in final test P-value explain There were no significant differences with other perinatal outcomes in neonates. So far, for COVID-19 newborns, 50% of cases show symptoms; this is very similar in terms of symptoms and analytical and imaging findings to adult clinic and in general with positive results.

CONCLUSION

Several conclusions were obtained regarding the study, the most important of which is that there is no effect regarding the Coronavirus 19 on its transmission from the mother to the fetus. Affects the development of the child through its transmission through the placenta, and after birth, children can contract the COVID-19 virus through respiratory droplet transmission (i.e., through the air), just like adults, so mothers who test positive for COVID-19 are advised to isolate Temporarily self-administered for newborns to avoid disease.

General recommendations for the care and management of pregnant women with COVID-19

1. Careful monitoring of the fetus from 26 to 28 weeks vasopressor fluids
2. Avoid high doses of fluids for pregnant women
3. Monitor oxygen saturation levels
4. Isolation of patients in the absence of private places
5. Formation of a team to manage the critical condition of the pregnant woman by the obstetrician
6. In cases of acute respiratory distress syndrome associated with COVID-19 infection, invasive ventilation is indicated to maintain maternal PaO 2 at values greater than 70 mmHg or oxygen saturation ≥ 95%.
7. In COVID-19 patients with spontaneous preterm labour, it is not recommended to resolve labor in an attempt to delay labor
8. COVID-19 is not an indication for termination of pregnancy unless there is a need to improve maternal oxygenation.

Preventive measures

Intensive care personnel must ensure adequate care and isolation of any obstetric patient present in the ICU where patients with unusual SARI are admitted, as about 40% of infections have been described in hospital scenarios of viral course and similarly if an obstetric patient is admitted to the care unit Focused for critical management, a specific obstetric staff should be assigned that should be attentive, isolated and in the exclusive

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management of these patients to avoid exposure to other patients and colleagues.

COVID-19 infection is not an indication for pregnancy termination unless there is a need to improve maternal oxygenation, as it is recommended that a critical management team be formed that includes an intensification specialist, an obstetrician, a maternal-fetal medicine specialist, and a neonatologist. This kit should define the criteria under which immediate delivery is performed and tools for assessing fetal growth and the presence of signs of acute fetal hypoxia.

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