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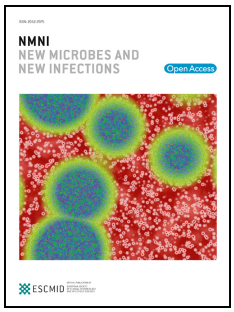

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Report of four pregnant women getting COVID-19 in Ilam, Iran: Case Series

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Abstract

Background:

Today, COVID-19 has become the most important health burdenall over the world.Pregnant women are determined as one of the high-risk groups. COVID-19 infection in this group may result in huge damages. This study aimed to report COVID-19 infection in four pregnant women in Ilam, Iran.

Findings

In the present study, four pregnant women infected with COVID-19 were reported. They were first positive for real-time PCR and then their CT scan werepositive, main clinical parameters of these patients were presented. All of these patients were hospitalized and all of them were treated successfully.

Conclusion

This study showed although pregnant women were at higher risk of COVID-19 infection, they were treated successfully. This study also reported that receiving the necessary care and treatment atthe hospital for pregnant women can be a good experience.

Keywords: COVID-19, pregnancy, Infection

Introduction

Since December 2019, the outbreak of coronavirus disease (COVID-19) has received much attention in China and then it has spread around the world.TheWorld Helth Organization (WHO)statistics showed that over 30.6 million COVID-19 cases and 950 000 deaths up to 20 September 2020 have been reported(1). COVID-19 is caused by Acute Respiratory Syndrome (SARS-CoV-2). Coronavirus is a new type of RNA enveloped viruses that can be transmitted through close contact within people(2-4). Due to high prevalence of this infection, the Iranian government decided to closure of schools, universities, people's businesses affecting the financial and economic losses to the people.

Due to some physiological causes, such as the suppression of the immune system,pregnant women are at high-risk groups (5, 6).The purpose of this study was to report the 4 pregnant women infecting the COVID-19 in Shahid Mostafa Khomeini Hospital that is located in Ilam, Iran .

Case introduction:

First Case

A 27-year-old pregnant woman had been short of breath for 3 days before the visit . Positive real-time PCR test for COVID-19 has been reported.Patient had mild fever, her other vital signs were Blood Presure = 120/80, Respirature Rate = 14 and Heart Rate = 86. She was conscious and her physicians parametressuch as electrocardiogram(ECG) (Fig.1a) and Computed Tomography (CT) angina were normal (Fig. 2a). Clinical laboratory parameterswere also summarized in Table 1.The woman's examination showed nomal and her pregnanct was in thirty-four weeks.

Second Case

The pregnant woman of 30 years old,washospitalized for relieving shortness of breath, fever, cough and abdominal pain. Its Real-time polymerase chain reaction (PCR) test for COVID-19 was positive. Mild fever hospital (37.7ºC) and other vital signs were normal (Blood Presure = 120/80 / Respirature Rate = 19 / Heart Rate = 100).She was conscious and O_2 Saturation was 94٪.The electrocardiogram(ECG) (Fig.1b), Computed Tomography (CT) scan (Figure 2b) and clinical laboratory were presented (Table 1). The patient's ultrasound showed a live fetus with a regular heart rate in the endometrial cavity. Pregnancy can be based on CRL = 53mm equal to 12w. Use of natural resources N.T = 1.31millimeter (mm). The pregnancy age based on BPD and FL is 22 weeks. The patient was discharged after 3 days under observation with warning signs and advice on home quarantine.

Third Case

A 42-year-old pregnant woman who underwent a cesarean section 9 days ago. She had been referred to the center with a positive Real-time polymerase chain reaction (PCR) test. The patient had a fever (38.8ºC) and other vital signs of the patient were normal (Blood Presure = 110/70 / Respirature Rate = 20 / Heart Rate = 90). The patient was conscious. O_2 Saturation was 96%. The patient did not have a cough, shortness of breath, abdominal pain, sputum, fever, chills, or constipation. The ECG (Fig. 1c) as well as a clinical laboratory (Table 1), were fully described.

Fourth Case

A 30-year-old pregnant woman of first Gravid who came to the center with a positive real-time PCR test. The patient had a fever (38.5ºC) and other vital signs were normal (Blood Presure = 115/75 / Respirature Rate = 18 / Heart Rate = 95). At the time of the examination,

the patient had 2 cm of 30% clay. The patient was conscious and her O_2 Saturation was 97%. The patient did not have cough or shortness of breath. The electrocardiogram(ECG) (Fig. 1c), Computed Tomography (CT) Scan (Fig. 2c), as well as clinical variables (Table 1) were fully described. The result of cephalic neonatal delivery with Opgar of 9.8, she was transferred to home for Corinthians.

Discussion

Pregnant women with COVID-19, which is a health indicator, are at risk because of both the pregnant woman and her infant.Fortunately, all of the pregnant women of this study have been treated successfully and no deaths have been reported.

As reported previously, COVID-19 infection has various saign and symptom which are as follow; They can be divided into four groups(7, 8). The first group is Asymptomatic infection that they are positive for real- time PCR, but there are no clinical symptoms, and imaging examinations are normal.The second group is acute upper respiratory tract infection: only fever, cough, pharyngeal pain, nasal obstruction, fatigue, headache, myalgia, or discomfort are observed. They have no pneumonia manifestation on imaging examination. The third group has mild pneumonia: They reportedwith or without fever while the accompanied by respiratory symptoms.The last group has severe pneumonia. They may have oxygen saturation <92, manifestations of anoxia, cyanosis, apnea, drowsiness, coma, feeding difficulty and dehydration signs (9). Although pregnancy is appeared withhighrisk of infection(10) but none of studied cxases is sever. In addition some of our cases has had abdominal pain(11). However this type of pain is not common in patients of COVID-19 infection.

This study had several limitations, the number of samples of the present study examined only hospitalized women and we could not obtain the information of outpatient pregnant women, if this happened we could see the results of the two groups together.

Conclusions

Pregnant women are in high-risk groups and should be screened immediatelyif infected, should be isolated until recovery.

Acknowledgments

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Table 1: Clinical information about pregnant women with COVID-19 in Shahid Mostafa Khomeini Hospital

Clinical variables	First Case	Second Case	Third Case	Fourth Case
WBC	6.1	6.2	7.7	**20.3**
RBC	4.41	3.94	4.68	**3.47**
HB	11.3	11.3	13.8	**9. 6**
HCT	34	34.3	43.4	**29.4**
MCV	78	87	93	**94.73**
MHC	25.8	28.2	29.5	**27.67**
MCHC	32.2	32.4	31.8	**32.65**
ESR	-	125	20	**13**
Platelets	196	199	359	**235**
Neutrophil	64	81	80	**85**
Lymphocytc	34	19	18	**17**
Monocyte	2	-	2	**2**
PT	12	-	-	**-**
PTT	36	-	-	**-**
INR	1	-	-	**-**
CRP	-	-	3+	**2+**
AST	-	17	-	
ALT	-	12.3	-	
ALK	-	248.8	-	
FBS	75	-	-	
UREA	11	21	25	
CR	0.6	0.8	1	
NA	135	138	142	
K	3.7	3.9	4.3	
PHOSPHATAZ	1.32	3.4	3.4	
Mangaxiam	1.76	1.84	2.06	
Ca	10.3	-	8.6	

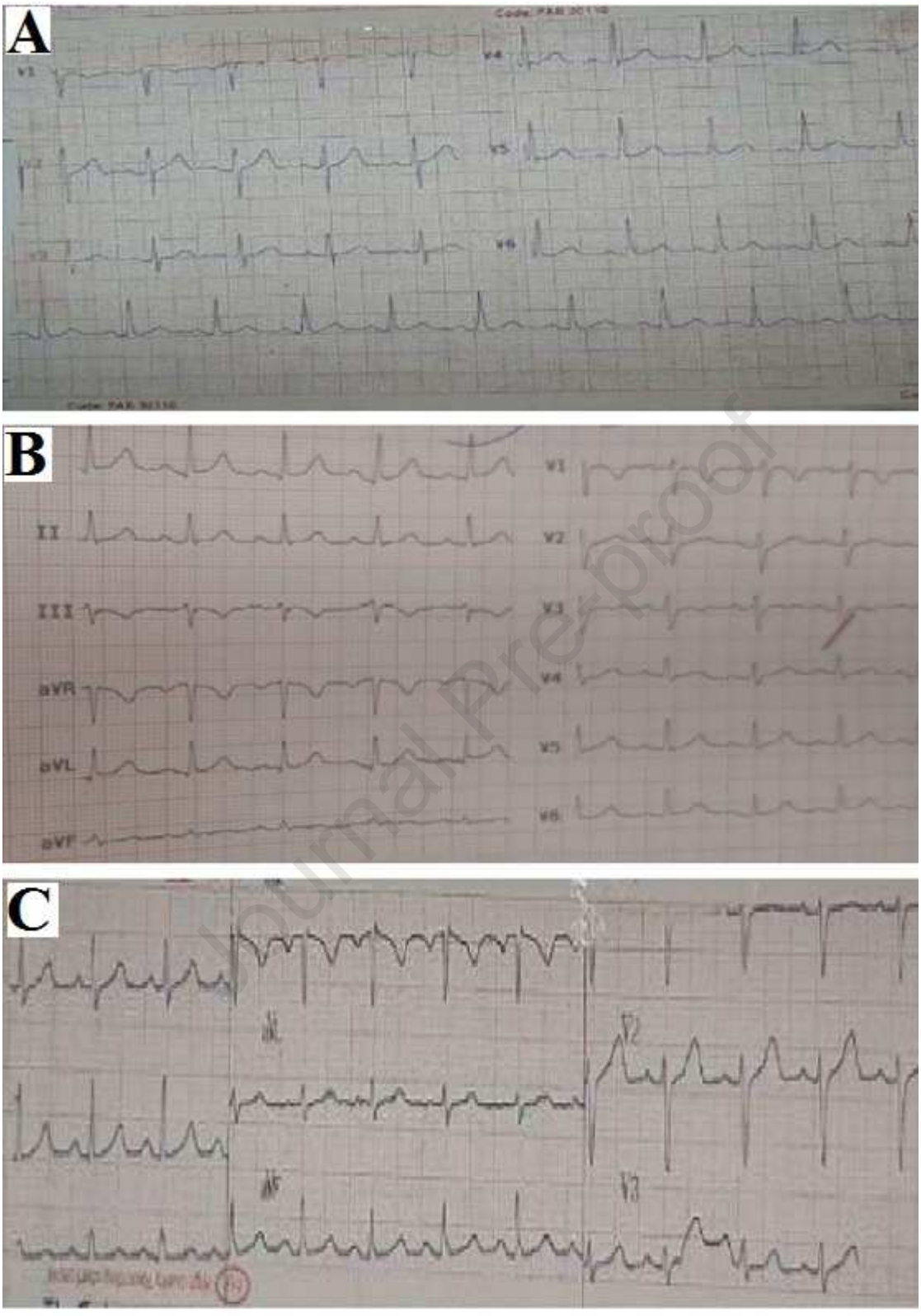

Fig. 1 The ECG of patients, A,normal sinus rhythm, heart rate 88, normal axis, no ST-T change, QT normal (400ms).B, normal sinus rhythm, heart rate 100, normal axis, no ST-T

change, QT normal (410ms).C, normal sinus rhythm, heart rate 90, normal axis, no ST-T change, QT normal (410ms).

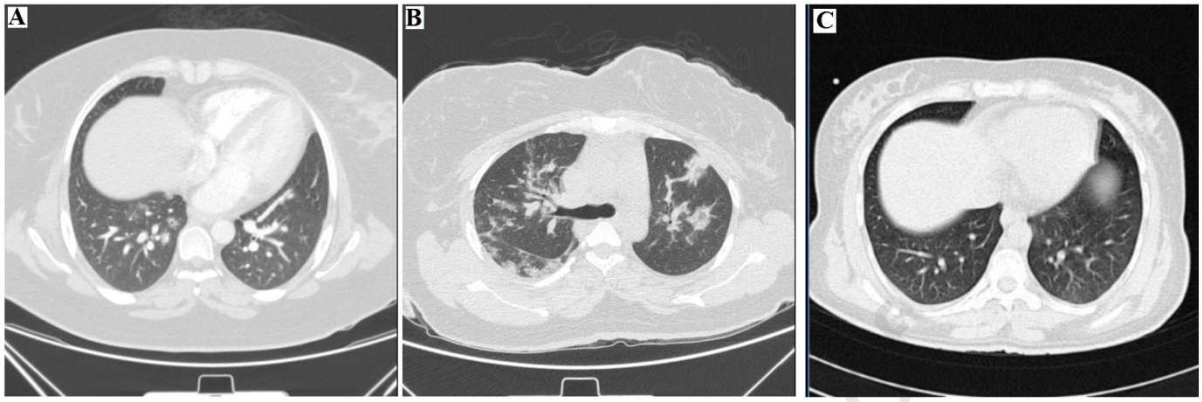

Fig.2The Chest HRCT of Patients, A, the pulmonary CT Angiography for rule out pulmonary thromboembolisem.B,shows peripherally predominant airspace consolidations, linear and ground glass opacities in both side lung fields and C, normal lung HRCT

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