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Case Report

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Covid-19 infection mimicking postpartum pulmonary embolism: A case report

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Abstract

The case was a 32-year-old, nulliparous pregnant woman, after in-vitro fertilization (IVF) pregnancy. Her contractions started, and the amniotic fluid membrane ruptured at 38 gestational ages. The patient developed shortness of breath and lower oxygen saturation which started suddenly at the 8th hour after the cesarean section procedure under general anesthesia. Thrombotic conditions that may appear during the postpartum period should be diagnosed early and immediate treatment should be started to resolve the actual cause.

Keywords: Covid-19, acute pulmonary embolism, IVF

1. Introduction

Coronavirus Disease (Covid-19) was first identified as a result of research conducted in a group of patients who developed respiratory symptoms (fever, cough, shortness of breath, etc.) in Wuhan, China. In this case report, we aimed to present a case of Covid-19 infection mimicking postpartum pulmonary embolism.

2. Case Report

The case was a 32-year-old, nulliparous pregnant woman, after in-vitro fertilization (IVF) pregnancy. Our patient was a non-smoker and had a body mass index (BMI) of 26.3 kg /m². Her past medical history was unremarkable and she had a negative family history of venous thromboembolism. She revealed no risk factors during her gestational follow-ups. When her contractions started and amniotic fluid membrane ruptured at 38 gestational ages, the patient was admitted to Medistate Hospital Gynecology and Obstetrics Clinic for cesarean section indication due to inadequate pelvis and IVF pregnancy in March; 2021. An alive and healthy female baby with birth weight and birth length of 3000 g and 47 cm, respectively, and an APGAR score of 9/10 was delivered under general anesthesia.

The patient developed shortness of breath and lower oxygen saturation which started suddenly at the 8th hour after the cesaeran section procedure under general anesthesia. Blood pressure was 110/70 mmHg; vaginal bleeding and postpartum uterus involution were normal. We considered pulmonary embolism first, and therefore took, a computed tomography (CT) of the thorax to conduct the diagnosis. We regarded; the appearance detected on the pulmonary parenchyma was considered as atypical viral pneumonias belonging to pandemic infection. Clinical assessment was recommended. We detected no finding for pulmonary embolism.The laboratory analyses revealed the following findings; arterial blood gas: pO_2:97,1 mmHg, ph:7,44 lactate:3,5 mmol/L, D-Dimer: 6943 ng/ml , sedimentation:31 mm/hour AST:19 U/L, ALT:6 U/L, LDH: 299 U/L, leukocyte:24,680, lymphocyte:1510, Hb: 11.5 gr /dl, Htc:31.8 %, PLT:182.000, Pro-BNP:335 pg/ml. Covid-19 (SARS-CoV) reverse transcriptase was negative.

Upon progression of respiratory distress at the 12th hour after surgery, the patient was transferred to the intensive care unit after detection of Covid-19 appearance on the CT scan. The baby was discharged home. The patient had no medical condition and was taken to isolation in the general intensive care unit due to the suspicion of Covid-19 when frosted glass appearance consistent with Covid-19 was detected in the pulmonary parenchyma after exclusion of pulmonary embolism in the contrast CT pulmonary angiography. However, although the PCR and further tests for Covid-19 were negative, the patient was isolated and Covid-19 protocol followed when an appearance consistent with Covid-19 was obtained by Thorax CT findings. Fig. 1 and 2 show Thorax CT images improvement of the ground-glass opacities.

There was no need for intubation and the patient was discharged safely on the 12th postoperative day. Low molecular weight heparin treatment continued until the fortieth post-op day.

3. Discussion

SARS-CoV2 affects cells by binding to ACE2 (angiotensin

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converting enzyme 2) receptors, which are highly expressed in lung alveoli, cardiac myocytes, vascular endothelium and other cells (1).

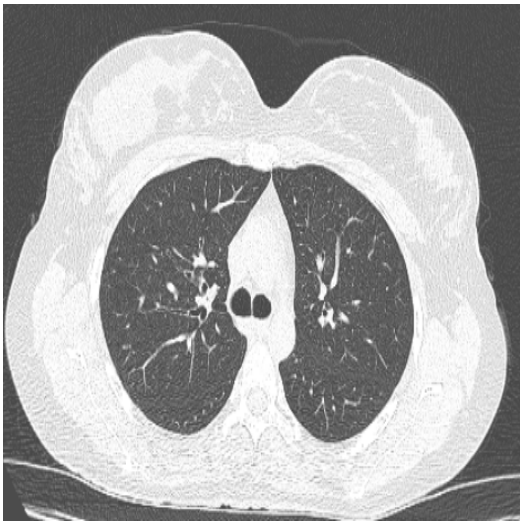

Fig. 1. Thorax CT image improvement of the ground-glass opacities.

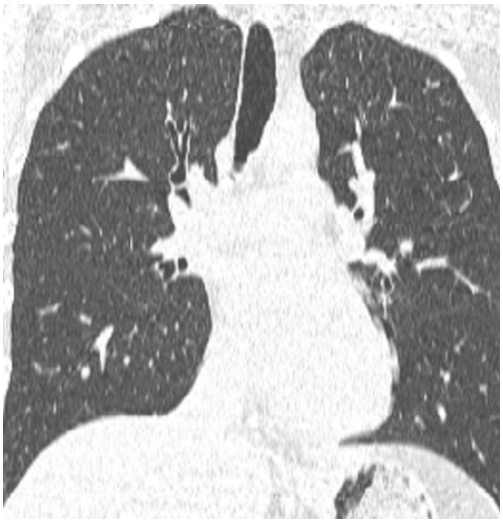

Fig. 2. Another thorax CT image improvement of the ground-glass opacities.

The disease starts with symptoms such as fever, weakness, headache, cough and/or myalgia. It can progress to a serious disease such as systemic inflammatory response syndrome (SIRS), acute respiratory distress syndrome (ARDS), diffuse intravascular coagulation and shock with multi-organ involvment (2). Changes in the hemostasis system and the development of thrombosis are increasing in patients with Covid-19(3).

Coagulopathy becomes evident with minimal changes in increased D-dimer and fibrinogen levels, prothrombin time (PZ), activated partial thromboplastin time (aPTZ), and platelet count. A high initial D-dimer level is associated with increased mortality (4).

In conclusion, thrombotic conditions that may appear during the postpartum period should be diagnosed early and immediate treatment should be started to resolve the actual cause. This should be considered for tailoring antithrombotic prophylaxis.

Conflict of interest

We declare no conflict of interest.

Acknowledgments

We received no financial support for the research, authorship, or publication of this article. We asked the patient to help us publish the case report in an international journal for discussion, including disease symptoms, diagnosis, and image related content. The patient agreed to allow us use her medical records and signed the consent form.

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