

LETTER TO THE EDITOR

Medicine Science 2021;10(4):1566-7

Anesthetic management for cesarean delivery in a COVID-19-infected pregnant woman with renal transplant

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Received 29 April 2021; Accepted 25 May 2021

Available online 26.09.2021 with doi: 10.5455/medscience.2021.04.147

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Dear editor,

Clinical features reported in pregnant women infected with COVID-19 are similar to those of adults infected with COVID-19 in the general population. Despite this, physiological changes in the immune system and cardiopulmonary system may make pregnant women more susceptible to respiratory pathogens. In addition to pregnancy, chronic diseases of the pregnant woman, transplantation and immunosuppressive treatments increase the risk of infection 1.

Nowadays, with the increase in the number of renal transplants and the developments in immunosuppressive treatments after transplantation, the mortality and morbidity rates have decreased and there has been a dramatic increase in the number of women of reproductive age who undergo renal transplantation 2. In this article, we wanted to share our experience of anesthesia management in the cesarean delivery of a pregnant with covid-infected renal transplant.

A thirty-years-old, 57 kilogram, 157 centimeter, 36-week pregnant woman was preoperatively evaluated upon the decision to terminate the pregnancy. It was learned that she had a renal transplant about 12 years ago and was follow up with hypertension. In the physical examination of the pregnant woman, there were cough and shortness of breath aggravated by exertion. Common coarseness in lung sounds in both hemithorax, ral was heard on the right side. In preoperative laboratory examinations, RT-PCR test was positive. She anemia consistent with iron deficiency

(Hgb: 8.9 g/dL). Coagulation profile was normal. Serum urea (52.3 mg/dL) and creatinine (1.49 mg/dL) were high, electrolytes were within normal limits. She was using tacrolimus 1 mg/day, methylprednisolone 5mg/day and nifedipine 30mg/day as treatment.

Informed consent was obtained for the procedure. After providing the necessary physical environment and protection for COVID-19, the patient was brought to operating room. First monitoring values were recorded as heart rate: 95 beat/ min, blood pressure: 125/89 mmHg and SpO₂: 94%. Spinal anesthesia was applied with 10 mg hyperbaric bupivacaine. Surgery was started after it was determined that the sensory block reached the T6 dermatome. At the 6th minute of the surgery, 2730 grams of male baby was delivered. The baby's APGAR scores was 6/8. The first peripheral oxygen saturation was 67%. He was taken to the neonatal intensive care unit due to respiratory distress. 100 ml urine output and approximately 500 ml of surgical bleeding were observed. When the surgery was completed, the spinal anesthesia level was determined to be at the level of T10 dermatome, and the patient was sent to the room with postoperative recommendations.

In the postoperative period, the lung was visualized by x-ray and tomography. Widespread patchy involvement was seen in both lungs (Figure 1). For COVID-19 infection, favipravir, hydroxychloroquine and enoxaparin triple treatment protocol was planned. On the postoperative 1st day, an increase in serum potassium value (6.1 mmol / L) was determined compared to the basal potassium value (4.7 mmol / L). No clinical findings were observed due to high potassium. During following day, potassium level decreased and reached normal values without intervention. RT-PCR test of the baby was negative. After the day, the baby's respiratory distress regressed and he was given to the mother. On the 13th day of his treatment, the patient was discharged (Table 1).

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Table 1. During the treatment, some laboratory test results of the patient

	Preoperative	Postoperative 1 st day	Postoperative 3 rd day	Postoperative 5 th day	Postoperative 7 th day	Postoperative 9 th day	Postoperative 11 th day
White Blood Cell (cells/mm ³)	12450	22880	21000	10970	9820	8830	9830
Neutrophil (cells/mm ³)	7670	17970	17400	8120	6690	5600	5380
Lymphocyte (cells/mm ³)	4530	1930	3180	2370	2540	2540	3340
C-Reactive Protein (mg/L)	112	108	176	55	71	70	35
Sedimentation (mg/h)	105	*	140	109	72	11	19
D-Dimer (ng/mL)	957	*	493	476	489	480	421
Fibrinogen (mg/dL)	521	*	592	547	592	577	427
Ferritin (µg/L)	1733	*	1945	1917	1711	1301	989

**Figure 1.** Postoperative, before the medical treatment for COVID-19 chest x-ray and some sections from the tomography

In conclusion, with the social spread of Covid-19, rare cases are encountered and interactions with different diseases are experienced. In this renal transplant covid-infected case, we provided a successful anesthesia management and delivered by cesarean section. We believe that these cases can be managed smoothly with the choice of spinal anesthesia in appropriate surgeries.

Conflict of interests

The authors declare that they have no competing interests.

Financial Disclosure

All authors declare no financial support.

Patient Informed Consent

Consent form is obtained.

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