

Anaesthetic management of caesarean delivery in renal transplant rejection patient

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Introduction:

- Pregnancy in a kidney transplant recipient continues to remain challenging due to risk of adverse maternal and fetal complications.
- There is an increased risk of pre-eclampsia, gestational diabetes, fetal growth retardation, prematurity and caesarean delivery.¹
- Side effects of immunosuppressants, interactions with anaesthetic drugs need to be carefully considered.
- A multidisciplinary planning is essential in such cases.

Case Report:

30-year-old primipara at 29-week gestation underwent a caesarean delivery following rejection of a renal transplant. She had a living kidney transplant in 2019 secondary to chronic glomerulonephritis. There was a progressive deterioration in her renal function throughout pregnancy, and her transplant biopsy showed cellular rejection despite being compliant with her medications. The procedure was uneventful, she had regular follow-up with the renal team and almost a year following her delivery, she continued to show stable kidney function.

Anaesthetic considerations:

- Infection risk due to immunosuppression.
- Invasive BP monitoring to maintain cardiovascular stability.
- Hematological status; risk of antibody development, available cell saver and leuco-depleted crossmatched blood.
- Improving surgical access by below umbilicus skin incision to avoid transplanted kidney.
- Drug interactions with anaesthetic drugs.

Discussion:

- All post-renal transplant pregnancies, in particular those with rejection, are high risk, and early involvement of a multidisciplinary team including obstetric, neonatal, anaesthetic, renal and transplant physicians is essential.
- The choice of anaesthetic technique depends on functional status of transplanted kidney, the cardiovascular status, hematological status and indication of caesarean delivery.
- We must be aware of the effects of pregnancy on renal allograft, physiological effects of transplant, as well as pharmacological implications of renal failure and immunosuppressants² in safe management of such cases.

References:

1. Shah S, Venkatesan RL, Gupta A et al. Pregnancy outcomes in women with kidney transplant: Metaanalysis and systematic review. BMC Nephrology 20, Article number 24:(2019).
2. Parikh B K, Shah VR and Bhosule G. Anesthesia for parturient with renal transplant. Anaesthesiol Clin Pharmacol V28(4); Oct –Dec 2012.

Drugs to be used with caution

Thiopentone-Benzodiazepines-opioids-oxytocin.

Drugs to be avoided

NSAIDS-Carboprost-Ergometrine.

Our values

