

## CASE REPORT

# Successful Term Pregnancy in Post Renal Transplant Patient

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## ABSTRACT

**Background:** Pregnancy in a post renal transplant patient falls under a unique category which requires teamwork including high-risk obstetricians, transplant physicians and neonatologists.

**Case report:** We report a successful term pregnancy in a post renal transplant patient.

**Conclusion:** Experience in field of post-transplant pregnancy is through continued case reports which will help us to anticipate the common problems encountered like the dosage of immunosuppressants, fetal monitoring, mode of delivery, role of breastfeeding.

**Keywords:** Immunosuppressants, Pregnancy, Renal transplant.

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## INTRODUCTION

Female recipients of allograft kidney transplant in child bearing age group do have an option to conceive provided pregnancy is carried out under optimal circumstances including stable allograft function for at least 1 year post-transplant, good control of blood pressure, appropriate adjustment of immunosuppressive and other teratogenic medications prior to pregnancy.

These pregnant women fall under a unique category and require management in close conjunction with

transplant physician. Hence, we report this case of a successful term pregnancy in a patient 9 years postrenal transplant.

## CASE REPORT

A 37 years old female, presented with 6 weeks pregnancy, with history of renal transplant in April 2005 for reflux nephropathy leading to end stage renal disease. Patient was on tab deflazacort 6 mg on alternate day, tab azathioprine 50 mg one and half OD, and cyclosporine 0.4 ml BD and her baseline investigations showed serum creatinine 1.36 mg/dl and blood urea nitrogen level 36 mg/dl. With advice of nephrologists, pregnancy was continued with addition of nitrofurantoin 100 mg BD for suppressive prophylaxis for urinary tract infection.

She had regular menstrual cycle and her last menstrual period was 12 December 2013.

She was monitored as follows:

- Nuchal translucency scan at 12 weeks and detailed anomaly scan at 20 weeks.
- Complete blood count, serum creatinine, random blood sugar, urinalysis, done every 15 days.
- Urine culture and cyclosporine levels every month.
- Sonography for fetal well-being and growth every 15 days from 28 weeks onward.

Her antenatal period was uneventful with well maintained renal functions and fetal growth. She presented at 37 weeks with leaking per vagina, she was admitted and planned for elective cesarean section for PROM with precious pregnancy.

Intraoperative period was uneventful. She delivered a healthy female child of 2.3 kg at 11:35 am on 25th August 2014. Considering her socioeconomic status, the patient was advised to breastfeed the baby.

On 5th postoperative period day, she developed discharge from wound which resulted in full-length gaping. Swab culture showed heavy growth of klebsiella which was sensitive for levofloxacin. Resuturing was done on 15th day.

## DISCUSSION

End stage renal disease disrupts normal gonadal function, which is, however, regained within months of successful renal transplant.<sup>1,2</sup>

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The optimal timing of pregnancy as per the current recommendations by American Society of Transplantation is that as long as graft function is optimal, defined as, a serum creatinine <1.5 mg/dl, with <500 mg/24 hours protein excretion and no concurrent fetotoxic infections or use of teratogenic drugs, and dosing of immunosuppressive drugs is stable at maintenance level, the patient can safely proceed with pregnancy.<sup>3</sup>

A common concern during pregnancy in post-transplant patients is the optimal choice of immunosuppressive agents with respect to fetal risk of congenital malformations. The current recommendation is to avoid mycophenolate mofetil and m-TOR inhibitor (sirolimus/everolimus) at least 6 weeks prior pregnancy.

Tailoring the dosage of drugs to maintain optimal levels is required as pregnancy alters pharmacokinetics of drugs and plasma drug levels. The recommendation by the American Society of Transplantation Consensus Conference is that to avoid graft rejection, immunosuppressive dosing should be maintained at pre pregnancy levels through frequent monitoring of serum drug levels.<sup>4,5</sup> Based on these recommendations, our patient was shifted to azathioprine from mycophenolate mofetil 1 year prior to pregnancy and cyclosporine levels were checked regularly during pregnancy.

The common complications which may arise in transplant patients are preeclampsia (30% as compared to 5 to 8% in general population), GDM/overt diabetes, infections and anemia. Increased incidence of preeclampsia can be explained due to cyclosporine induced production of thromboxane and endothelin, diabetes due to cyclosporine and steroid use, infections due to generalized immunosuppression and anemia due to bone marrow suppression.

Nutritional needs of patients are as any general pregnancy patient except for increased doses of iron and calcium required due to high prevalence of osteopenia and iron deficiency anemia.

Fetal implications are the increased risk of IUGR, preterm delivery, PROM, respiratory distress syndrome, low-birth weight and neonatal jaundice.

As for mode of delivery, data suggest that, in absence of complication, spontaneous labor can be allowed to occur and cesarean delivery performed only for obstetric indication.

If a cesarean delivery is performed, particular attention should be paid to the transplanted kidney

situated in right iliac fossa. The course of transplanted ureter should be kept in mind. For this, an experienced obstetrician must be present during the delivery (be it vaginal or cesarean) who understands the details of renal transplant and the altered anatomy. Prophylactic broad spectrum antibiotics should be used and stress dose steroids have been recommended following delivery.

Breast feeding is another important issue to be addressed. The EDTA guidelines recommend against breastfeeding while American Society of Transplantation recommends that it should not be viewed as absolute contraindication. The American academy of pediatrician supports breastfeeding in mothers taking prednisolone and advises against it for those on cyclosporine. There are no specific recommendations for those on azathioprine and tacrolimus.<sup>6</sup> Until further studies are available, expert consensus is that breastfeeding need not be seen as an absolute contraindication.

## CONCLUSION

There are many questions to be answered about the safety of pregnancy in transplant setting. The long term maternal outcomes with respect to graft and fetal outcomes with respect to immunosuppressant medications need to be evaluated. Hence, it is the need to report all such pregnancies and the problems encountered. The management of pregnant renal transplant patient require teamwork which includes high-risk obstetricians, transplant physicians and neonatologists well equipped with knowledge of transplant related facts.

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