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ORIGINAL ARTICLE

Contraceptive counseling: An unaddressed issue of Post Renal transplant women of reproductive age

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ABSTRACT

Background: Counseling regarding conceiving and contraception in post renal transplant female recipients is neglected and important aspect of post-transplant care.
Aim: To conduct to report use of contraceptive measures, pregnancy and its outcomes during post-transplant period. This study highlights the importance of contraceptive counseling after renal transplant.
Results: Out of total 14 patients of our study only 5 (36%) were using contraception while 9 (64%) were not using any contraceptive method. Out of 9 non users 7 patients were never counseled regarding contraception. Moreover they had no awareness regarding drug modification or renal and feto-maternal outcomes of pregnancy after renal transplant.
Conclusion: Reproductive age female patients undergoing renal transplant should be given special attention regarding counselling on contraception, pregnancy and it outcomes.
Key words: Contraception, renal transplant, pregnancy,

INTRODUCTION

Impairment in normal renal functions is associated with disturbance in reproductive system in both men and women. A variety of sexual problems have been observed in women with chronic kidney disease (CKD) including infertility, disturbed menstrual cycle and loss of libido. About 90% of women with dialysis dependent CKD have menstrual irregularities. Impaired fertility is mostly explained by disturbed hypothalamic–pituitary–ovarian axis (HPO)[1,2] .Renal transplant is modality of choice in End stage renal disease (ESRD). Mostly fertility recovers after successful renal transplant in 1 to 12 months.

Generally, before transplant patients on dialysis have amenorrhea so concerns of conception may not come to their mind before transplant[3] but restoration of fertility after transplant brings the points of "time of conception" and "need of contraception" under consideration in clinical practice of Nephrology and Obstetrics.

According to Kidney Disease Improvement Global Outcomes (KDIGO) guidelines pregnancy is contraindicated within 1 year of post-transplant period. Pregnancy is considered safe after 1 year of transplant when serum creatinine is below 150mmol/l, proteinuria below 500mg/24 h, blood pressure well controlled, no element of rejection or active infection and patients is compliant to medication. Pregnancy is advised after 1 year of transplant when renal function has stabilized and immunosuppressant drugs level has optimized.

Despite of improvement in hormone profile, fertility is still low in post-transplant life[4]. Within 1 year of renal transplant and in graft dysfunction, contraception is advisable to patients.

The Center for Disease Control and Prevention (CDC) also provides recommendations on contraception in solid organ transplant patients depending upon risk benefit ratio. These guidelines address the recommendation separately on stable and complicated grafts[5,6]. Method of contraception in post-transplant is also debatable. Barrier methods are safe but mostly not preferable due to high failure rate and patient's choice. In case of hormonal contraception drug interaction with immunosuppressants must be considered seriously. Generally all hormone based contraceptives are considered acceptable in women with normal graft function. In graft dysfunction intrauterine device (IUD) and Progesterone Only Pills (POP) are preferable options [6,7]. Mean conception time after renal transplant is 2 year [8]. Right selection of contraception and careful monitoring is key management of such cases. Every pregnancy after renal transplant is considered high risk and should be dealt carefully by multidisciplinary team. There is increased feto-maternal risk including diabetes, hypertension, pre-eclampsia, eclampsia, pre term delivery etc. Such pregnancies should be managed by Nephrologist and Obstetrician having experience in dealing high risk pregnancy.

There is limited data in literature on post renal transplant contraception, pregnancy and its outcomes. Rationale of this study is to highlight this unaddressed aspect of post renal transplant course of management. This is the first study in Pakistani population on this topic.

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METHOD

This observational cross sectional study was conducted in Nephrology Department of Pakistan institute of medical sciences (PIMS) Islamabad, after taking approval from ethical review board (ERB) of Shaheed Zulfiqar Ali Bhutto Medical University/PIMS Islamabad. Duration of study is 4 year from January 1, 2018 to December 31, 2021. After taking informed consent patients were included according to following criteria;

Inclusion Criteria:

1. Post renal transplant patients with age 18-40 years.
2. Women who were married at the time of transplant.
3. With duration of transplant 6 months or more.

Exclusion criteria:

1. Those women who were sexually inactive or unmarried.
2. Already labeled as sub fertile/ infertile before transplant
3. Graft dysfunction (Rejection/ chronic allograft nephropathy/ ongoing calcineurin inhibitors toxicity)

A predesigned questionnaire containing demographic details and 7 questions related to contraception details were asked from patients. Data was analysed by SPSS version 25. Statistical values were calculated and described as frequencies and percentages.

RESULTS

Total 14 women were enrolled in the study. Average age of the women was 30.9 years and mean duration of transplantation was 18.2 months. Out of 14 patients only 5 patients (36%) were using

contraception while 9(64%) were not using any method of contraception (Fig. I).

Out of 5 patients using contraception only 1 patient (20%) was advised contraception by Transplant Nephrologist, 1(20%) were advised by Gynecologist, 1(20%) by lady health worker while 2(40%) were using contraception on their own. Most common method of contraception used was barrier method which was 2 out of 5 (40%) (Table I).

Out of 9 patients who were not using any kind of contraception, 7(78%) were not advised any contraception at any time of their treatment or follow-up while 2 patients didn't follow advice. These 7 patients had no knowledge regarding use of contraception after transplant and drug modification in pregnancy. Moreover they had no knowledge regarding avoidance of conception for 1 years after kidney transplant. Out of these 9 patients, 3 (33.3%) patients conceived, 2 patients conceived after 1 year of transplant and 1 patients within 1 year of transplant. 1 women had miscarriage in 2nd trimester and developed acute kidney injury which recovered by supportive management. Among these 7 women, 2 patients had live birth. The mode of delivery was cesarean section, both had successful pregnancies, one of them was preterm and one was at term. However 6 patients (66.6%) among contraception non users didn't conceive till 2 years of transplant despite of not using any contraceptive method. Baseline and follow up serum Creatinine was less than 150mmol/l and proteinuria less than 500mg/24h in all study participants expect 1 patient who had miscarriage in 2nd trimester and developed AKI. Cause of AKI was acute tubular necrosis (ATN) which was proven by graft biopsy.

Figure I: Users and non users of contraception after transplant

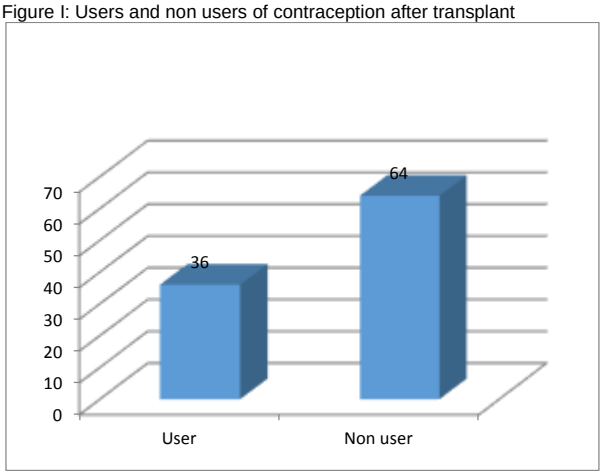

Table I: Method of Contraception

Contraception used	No of women = 5
Barrier method	2 (40%)
Withdrawal	1 (20%)
IUD	1 (20%)
OCPs	1 (20%)

DISCUSSION

There are different opinions on time duration to conceive after renal transplantation. KDIGO guidelines recommend to wait for 1 year while American Society of transplantation recommend 2 years.[8, 9]. Kim et al. reported that pregnancy within the first year after transplantation might be safe.[10] However it would be safer to have 1 year follow up on immunosuppressant without rejection.

All women who are sexually active should be offered contraception for 1 year after renal transplant. Patients who want to conceive after 1 year of renal transplantation should be thoroughly reviewed in all aspects. There should be no episode of rejection, infection like BK virus, CMV in the last year, renal functions should be stable, creatinine should be less than 150mmol/l, and proteinuria should be less than 500mg/24h. It is responsibility of Transplant team to counsel the patients regarding contraception and pregnancy as the part of post-transplant care, but unfortunately this issue remains neglected in clinical practice. Eide et al.[11] and Guazzelli et al[12] reported Norwegian and Brazilian data respectively, 37% of Norwegian women and 25% of Brazilian women with kidney transplantation did not receive advice on contraceptive use in preoperative and early postoperative period comparing it with our study in which 9 out of 14(64%) patients were not using contraception after kidney transplant.

Selection of contraception method is also debatable. Barrier method was most common method of contraception in our study (40%). A study conducted in Diyarbakır, Turkey[15] reported 48% of patients use withdrawal method which is not an effective and safe method of contraception. The consensus report of the American Society of Transplantation does not recommend levonorgestrel intrauterine device due to pelvic infection risk. However, it was accepted in a subsequent review[13]. European guidelines do not give specific recommendation on choice of contraception[14].

CONCLUSION

Contraception advice and counseling is a neglected aspect in the management of Post Renal Transplant women of reproductive age. Women who are undergoing kidney transplant should receive special attention regarding fertility restoration and pregnancy outcome and contraception. Collaboration between Nephrologist and Obstetrician can overcome this problem.

Conflict of interest: Nil

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