

## Menstrual function and Endocrine Status in Kidney Transplanted Women

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Republic Scientific and Practical center of Organ and Tissue Transplantation performs about 500 kidney transplantations per year. Global trends show growth of kidney transplantation amount, the number of female patients increases, patient's age gets significantly younger. The aim of the study was to evaluate menstrual function and describe aspects of endocrine status in women with transplanted kidney. In this study we collected history by interview, physical examination, hormone testing was conducted by ELISA. Control group consisted of healthy women matched by age. The study included 55 women aged 18-44 who had undergone kidney transplantation within last 6 years. All patients were examined by a nephrologist every 3 month and had adequate graft function confirmed by urinalyses, creatinine levels ( $<1,5$  mg/dL) and by ultrasound. They were administered immunosuppressive therapy (Medrol-Ciclosporin/Azathioprin/Tacrolimus- Mucophenolate mofetil) in different combinations. Women who suffered diabetes, had severe infections, were pregnant or had complications in graft functioning were excluded from the study group. Measures showed that 20 patients (36.4%) had menstrual disturbances: 3 suffered from amenorrhea, 2 women had polymenorrhea, others presented with oligomenorrhea. Average levels of LH, FSH, 17-OHP and E2 were similar in two groups. Women with irregular menses showed Antimullerian hormone and inhibin B average levels lower ( $p<0.05$ ) than in controls. However 3 women with amenorrhea were diagnosed with premature ovarian failure afterwards. Serum prolactin levels were higher in kidney recipients than in controls ( $p<0.01$ ) and in 78% above normal range. Testosterone levels were significantly lower ( $p<0.05$ ) with presence of hypertrichosis in 25% of patients. 25(OH)D status correlated strongly with time after transplantation and remained below recommended threshold ( $p<0.001$ ). In the study cohort TSH and fT4 levels restored after transplantation, but in 5% independently were found changes in thyroid function that required drug administration. Women after transplantation should be examined by a gynecologist to administer appropriate hormonal therapy in case they have menstrual disturbances, are planning to bear a child, have features of ovarian failure or aim to increase the living standard and preserve fertility. Thyroid function should be measured routinely and therapeutic doses of Vitamin D should be administered to all women after kidney transplantation.

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