

F-E1

임신 전후 기간 동안 사이클로스포린 또는 타클로리무스를 복용한 신장 이식 여성의 신기능의 변화

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Change of Renal Functions of Women with Allograft Kidney Receiving Cyclosporine or Tacrolimus in Peripartum Period

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Background: To investigate the effects of pregnancy and delivery to renal functions of women with allograft kidney and the relationship between immunosuppressant dose and serum drug level in peripartum period.

Method: The study population consisted of 60 women with 74 deliveries after kidney transplantation at Asan Medical Center from January 1, 1991 to December 13, 2010. Laboratory and clinical parameters were examined at each 8 time points, which were 12 months before delivery, each mid-point of three trimesters, delivery at that time, 3 months, 6 months, and 12 months after delivery.

Results: The mean ages at the time of transplantation and delivery were 27.4±4.4 and 31.5±3.8 years old, respectively. Ten women experienced deliveries in twice, and one had three times. Twin delivery were 2 cases. Significant serum creatinine elevation, which was defined as more than 0.5 mg/dL, was found in 8 (10.8%) deliveries out of 74 deliveries. In other 66 (89.2%) deliveries which maintained relatively stable creatinine levels, the serum creatinine was slightly reduced by 0.14 mg/dL on average during gestation and restored to pre-pregnant level after delivery (Fig. 1). The pattern of percentage change of estimated GFR during pregnancy in these patients resembled that of normal pregnancy. As the calcineurin inhibitor (CNI), cyclosporine was used during 51 deliveries (68.9%) and tacrolimus in others. Neither gestational period and body weight at birth was different from two groups. The significant differences of serum creatinine level were also not observed at each 8 time points. Figure 2 showed the patterns of serum CNI levels and their doses. In gestational period serum CNI levels decreased in the similar way of serum creatinine levels and additional CNI drugs was needed to recover therapeutic drug level. Other immunosuppressants doses, azathioprine and steroid, were not changed in peripartum period.

Conclusion: In most women with allograft kidneys, renal function was slightly improved during pregnancy and returned to pre-pregnant level after delivery. To maintain the therapeutic CNI level, at least about 25% CNI dose elevation should be considered in gestational period.

Key Words: 임신, 칼시뉴린 억제제, 신장 기능
Pregnancy, Calcineurin inhibitor, Renal function

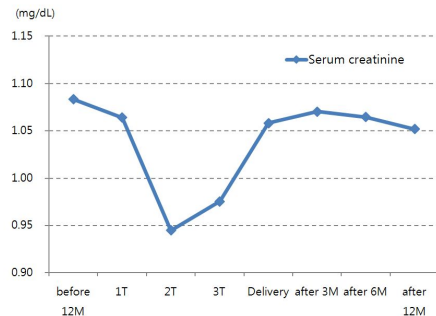


Fig. 1

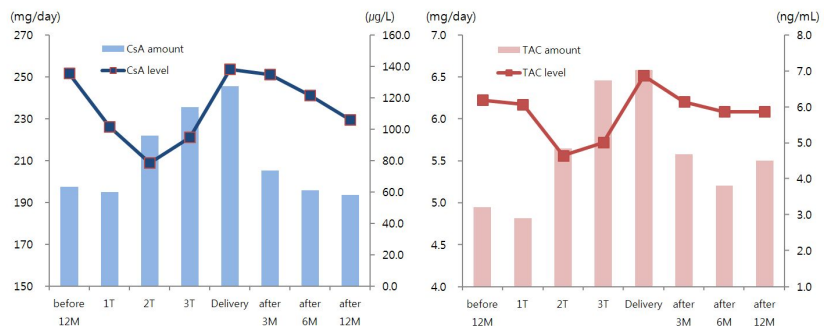


Fig. 2