

Immunosuppressive Therapy and Breast-Feeding after Renal Transplantation

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Pregnancy in the renal transplant population now seems to be relatively safe when renal function is adequate before conception and when maintenance immunosuppressive therapy is instituted [1]. All patients receiving renal allografts at our department are given immunosuppressive agents, azathioprine and methylprednisolone. Although breast-feeding in these patients has been discouraged because of the potential risk to the infant from the immunosuppressive drugs, 2 of them chose to breast-feed their infants.

It is widely accepted that human milk has the potential to afford a baby significant protection against a range of infections, particularly of the respiratory and gastrointestinal tracts [2]. The precise way in which breast milk achieves its antibacterial and antiviral properties is not well known, but it does contain a wide range of protective factors, including immunoglobulins, complement components and different types of cells with phagocytic capacities [3]. Of the immunoglobulins, secretory IgA is the most important. In a recent publication [4], the IgA level in the breast milk of a patient taking immunosuppressive drugs was found to be similar to that in the controls. Also, there is no evidence so far that immunosuppression can occur from the small amount of azathioprine (6-mercaptopurine) or methylprednisolone found in the breast milk of transplanted mothers who are under the lower maintenance dose of immunosuppressive drugs during gestation and lactation. In our 2 cases, immunosuppressive drugs as well as breast milk IgA levels were not determined, but the infants described herein (table I) have normal blood cell counts, no increase in infections and above-average growth rate.

References

- 1 Rudolph, J.E.; Schweizer, R.T.; Bartus, S.A.: Pregnancy in renal transplantation. *Transplantation* 27: 26 (1979).
- 2 Editorial: The how of breast milk and infection. *Lancet* *i*: 1192 (1981).
- 3 Whitehead, R.G.: Nutritional aspects of human lactation. *Lancet* *i*: 167 (1983).
- 4 Coulam, C.B.; Moyer, T.P.; Jiang, N.S.; et al.: Breast-feeding after renal transplantation. *Transplant. Proc.* 13: 605 (1982).

Table I. Report of cases

	Patient 1	Patient 2
<i>Past history</i>		
Primary disease	chronic glomerulonephritis	reflux nephropathy
Donor source	mother	mother
Age at time of transplantation, years	21	26
Interval from transplantation to conception, months	27	50
<i>Prenatal history</i>		
Age at time of pregnancy, years	23	30
Dose of methylprednisolone, mg/day	8	8
Dose of azathioprine, mg/day	75	100
Blood pressure during pregnancy, mm Hg	110-130 70-80	125-150 80-100
<i>Outcome of pregnancy</i>		
Duration of gestation, weeks	39	38
Delivery	normal	cesarean section
<i>Data of infant</i>		
Birth weight, kg	3.2	2.8
Sex	male	female
Complications	none	none
<i>Renal function</i>		
Maximal serum creatinine, mg/100 ml		
Before pregnancy	1.0	1.4
During pregnancy	1.2	1.8
After pregnancy	1.0	1.3
Creatinine clearance at the end of gestation, ml/min	80	65

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