

HBV and HLA were not significantly associated with poorer 2-year graft survival.

In conclusion, immunosuppressant was the single most important factor influencing graft survival for more than 2 years.

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### **Treatment of Anemia of Chronic Renal Failure with Recombinant Human Erythropoietin**

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To examine the effects of erythropoietin on the anemia of chronic renal disease and on the rate of renal deterioration, we administered recombinant human erythropoietin to 8 patients with anemia and progressive renal failure who did not yet require dialysis (serum creatinine level, 1.9 to 8.2 mg/dl) and to 24 anemic patients with end-stage renal disease who were undergoing hemodialysis. The recombinant human erythropoietin was given subcutaneously (starting dose 50 units/kg of body weight) twice a week to predialysis patients and 14 hemodialyzed patients, and intravenously (starting dose 50 units/kg) three times a week to 10 hemodialyzed patients for 12 weeks. The dose was reduced half when hematocrit reached 30%. In predialysis patients, the mean hemoglobin increased from 7.3 g/dl 11.1 g/dl, mean hematocrit from 0.22 to 0.33, mean RBC mass from  $2.38 \times 10^{12}/L$  to  $3.54 \times 10^{12}/L$ , mean MCV from  $93.6 \mu^3$  to  $96.4 \mu^3$ , and mean plasma ferritin decreased from 329 ng/ml, mean transferrin saturation ratio from 0.43 to 0.32. We could not find any interval change of BUN and serum creatinine during the erythropoietin treatment. In hemodial-

ized patients with intravenous injection, mean hemoglobin increased from 6.2 g/dl to 8.4 g/dl, mean hematocrit from 0.18 to 0.25, mean RBC mass from  $1.93 \times 10^{12}/L$  to  $2.78 \times 10^{12}/L$ , and transferrin saturation ratio decreased from 0.34 to 0.24. In hemodialyzed patients with subcutaneous injection, mean hemoglobin increased from 6.1 g/dl to 11.7 g/dl, mean hematocrit from 0.18 to 0.29, mean RBC mass from  $2.02 \times 10^{12}/L$  to  $2.99 \times 10^{12}/L$ , and mean plasma ferritin decreased from 479 ng/ml to 179 ng/ml, mean transferrin saturation ratio from 0.52 to 0.36. During erythropoietin treatment, none required transfusion, generalized pruritis was present in one patients, headache was present in 7 patients and hypertension worsened in 4 patients.

In conclusion, erythropoietin therapy is effective and safe in correcting the anemia of patients with progressive renal failure and of hemodialyzed patients without affecting renal function. And subcutaneous injection is as effective as intravenous injection with relatively small dose.

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### **Herpes Simplex and Varicella Zoster Infectio in Renal Transplant Recipient**

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Five hundred twenty-five recipients of renal allograft were studied for infection with H. simplex and V. zoster after transplantation. To assess the incidence, associated clinical features, and precipitating factors, we retrospectively reviewed the records of patients undergoing renal transplantation at Catholic Medical Center from May 1, 1984 through Jan 31,

1991. Sixty-nine (13.1%) of the 525 transplant recipients studied developed herpetic mucocutaneous lesions. The incidence of infection in male and female were 11.3% and 18.1%, respectively. In post-transplant diabetics, the incidence of infection was higher than that of non-diabetics (38.5%: 12.5%,  $p=0.04$  Fisher's exact text). Those who receive OK-T3 regimen had a higher incidence of infection than non-OK-T3 group (56.3%: 11.8%,  $p=0.001$  Fisher's exact test). The primary sites of *H. simplex* infection were perioral (67.6%), genital (29.4%), combined (3%) and *V. zoster* were trigeminal (14.3%), cervical (11.4%), thoracic (42.8%), lumbar (2.9%), sacral (22.9%) and undefined (5.7%). Painful eruption was developed from 38.8% by four weeks, 53.7% by eight weeks, and 76.1% by twenty weeks.

In conclusion: (1) The herpes simplex and varicella zoster infection incidence is sixty-nine (13.1%). (2) In post-transplant diabetes, the infection is greater than non-diabetes. (3) Those who received OK-T3 because of graft rejection has high incidence of herpetic infection. It is likely that diabetics and graft rejection are potential risk factors in herpetic infection of renal transplants.

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### Clinical Experience with Swan Neck Tenckhoff Catheters

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The Swan Neck Tenckhoff catheter are designed to reduce major complications including peritonitis, exit site infection, pericatheter leak and catheter tip migration. Between July 1989 and December 1990, 80 compared the clinical data from 80 Swan Neck

Tenckhoff catheters and data from 35 standard Tenckhoff catheters implanted between 1985 and 1989, retrospectively. In standard catheter group mean age was 43 years, M : F ratio 25 : 10, and diabetic patients were eight (23%). In Swan Neck catheter group, mean age was 40 years, M : F ratio 21 : 29, and diabetic patients were fifteen (30%). In the same period between July 1989 and March 1991, patients were fifteen (30%). In the same period between July 1989 and March 1991, the peritonitis rate and exit site infection rate in standard catheter group were 1.15/12 patients months and 0.37/12 patient months, and those in Swan Neck catheter group were 0.70/12 patient months ( $p<0.05$ ), respectively. In diabetic patients, the peritonitis rate of standard catheter and Swan Neck catheter group were 1.22/12 patient months and 1.01/12 patient months ( $p>0.05$ ). In nondiabetic patients, however, the peritonitis rate of standard catheter and Swan Neck catheter group were 1.14/12 patient months and 0.53/12 patient months ( $p<0.05$ ). In Swan Neck catheter group, pericatheter leak was present in only 1 case, and catheter tip migration happened in 5 cases, of which 2 cases resulted in catheter failure due to omental rapping.

In conclusion, the Swan Neck catheter is better than standard catheter to reduce the complication rate.

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### 신생아와 영아의 신부전증 치료를 위한 저용량 복막투석

영남의대 소아과

안수호 · 박용훈 · 허정욱

영아나 어린 소아들의 급성신부전증의 치료로서 복막투석은 방법이 간편하고 안전하며 용이하게 적용할 수 있으며 유효한 복막면적이 넓어 환외여과가 성인에 비하여 보다 효과적이라고 알려져 있다. 그러나 때로는 혈액학적으로 불안정한 상태에서는 혈액투석이나 통상적인