LYMPHOCELES IN PEDIATRIC RENAL TRANSPLANTATION: DIAGNOSIS AND MANAGEMENT

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The perirenal and pelvic accumulation of loculated lymphatic fluid following kidney transplantation surgery is a recognized but infrequent complication. We have observed such lymphoceles in association with 5 of 108 renal allografts in children. 2/5 lymphoceles occurred with cadaveric allografts and 3/5 with live related kidneys. Fever, renal insufficiency, and oligo-anuria were present in all 5 patients. Lower abdominal pain (4/5) and leg swelling (3/5) were findings not typical of rejection. Occurrence ranged between 1 and 9 weeks post-transplantation.

The combination of renal scintigraphy and ultrasonography was successful in differentiating the lymphoceles from extravasated urine, hemorrhage and inflammatory collections. Lymphatic collections were seen as persistent photon deficient areas on scintigraphic flow and static images. Contact B-scan ultrasonograms showed them as anechoic collections with strong through transmission. Both modalities detected kidney obstruction secondary to the lymphocele.

All patients required surgical drainage because the lymphocele obstructed the transplanted kidney or pelvic lymphatics. All patients have retained their allografts which are functioning satisfactorily.

94 EXPERIENCE WITH ANTITHYMOCYTE GLOBULIN (ATG) IN PEDI-
ATRIC RENAL TRANSPLANT RECIPIENTS. Cote, M.L., Gruskin, A.B., Baluarte, H.J., Somers, L.A., and Lischner, H.W. St. Christopher's Hospital for Children and Temple University School of Medicine. Philadelphia, Pa. U.S.A.

The efficacy of ATG (ATGAM®-Upjohn Co.) in prolonging patient + cadaver renal allograft survival was studied in 21 patients, age 5 to 19 yrs receiving transplants from May 1977 to Oct. 1979. Of the 9 patients randomly selected to receive ATG, 3 were given a fixed dose for the 28 day period of therapy; the daily doses of 3 were altered in relation to the percentage of rosette forming cells. Six of the selected patients received the full course of therapy; 1 patient had a positive skin test to ATG; 2 had untoward reactions to the first (and only) administered dose. Of those receiving ATG 1 had irreversible rejection 1 mo after transplantation, and 1 kidney was rejected after 3 mo. Three control patients experienced irreversible rejection within 1 mo, + 2 kidneys were rejected after 3 mos. All patients except 1 experienced threatened rejection episodes during the first mo. One patient died at 2 wks and 2 died within 1 yr after transplantation. All 3 were controls. The 5 treated patients with functioning allografts 4 mos to 2 yrs after surgery had creatinine clearances from 42 to 91 ml/min/1.73M²; 7 controls had clearances from 22 to 120 ml/min/1.73M². Conclusions: Although the number of patients was very small, there appeared to be no correlation between patient and graft survival and ATG therapy. There was a correlation between graft survival and HLA matching.

DIALYSIS

92 THE EFFECTS OF CHANGING FROM DAILY TO ALTERNATE DAY STEROIDS ON THE HYPERLIPIDEMIA OF CHILDREN WITH KIDNEY TRANSPLANTS. Kaiser, B.A., Potter, D.E., University

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Hyperlipidemia is a problem of most patients who have received kidney transplants and the use of steroids is felt to be one of the major causes of this problem. To evaluate the effect of daily (QD) vs alternate day (QOD) steroids on serum cholesterol (C) and triglyceride (T) levels, we compared the lipid levels of the children receiving QD to those receiving QOD prednisone. In addition, we followed the changes in C and T in 9 children who were changed from QD to QOD prednisone after transplantation. The serum C and T levels were compared in 15 children receiving QD prednisone (242±46 mg% and 150±98 mg% respectively) to 26 children receiving QOD prednisone (242±49 mg% and 124±59 mg% respectively) and there was no significant difference. However, in 9 children who were changed from QD to QOD prednisone at 6 months after transplant and then followed for 1 year, serum C and T decreased. While receiving QD prednisone, serum C increased from 257±65 mg% pre-transplant to 268±75 mg% (p=ns) and serum T decreased from 262±212 to 168±78 mg% (p=ns). After the change from QD to QOD prednisone, the serum C decreased to 211±48 mg% (p<0.01) and T decreased to 120±70 mg% (p<0.02) in 1 year. During this period the prednisone dose was decreased from 1.3±0.4 to 0.7±0.3 mg/kg QOD. The change from QD to QOD steroids and decreasing steroid doses is associated with a decrease in the degree of hyperlipidemia after renal transplantation.

95 BICARBONATE HEMODIALYSIS IN A PATIENT WITH LACTIC ACIDOSIS, SEPSIS, DIC, AND ACUTE RENAL FAILURE.

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Conventional acetate hemodialysis may exacerbate acidosis in the patient with elevated serum lactate. The patient who is unable to utilize acetate may actually lose serum bicarbonate into the dialysate.

Hence bicarbonate rich dialysate (containing 34 mEq/l bicarbonate) was utilized when a patient with sepsis and acute renal failure developed lactic acidosis with an R fraction of 37 mEq/l. Arterial pH was 7.33 with a pCO₂ of 15 mm Hg and a base deficit of 17 mEq/l. Three hours of bicarbonate dialysis decreased the R fraction to 17 mEq/l, elevated the pH to 7.38, and lowered the base deficit to 6 mEq/l. The lactate pyruvate ratio fell from 31.1:1 to 16.6:1.

Within 48 hours, despite the maintenance of normal blood pressure, the R fraction had risen to 35 mEq/l. The pH had fallen to 7.18 with a base deficit of 19 mEq/l. Three hours of bicarbonate hemodialysis caused lowering of the R fraction and base deficit to 16 mEq/l and 5 mEq/l respectively with elevation of the pH to 7.33.

The correction of the lactate pyruvate ratio and the improvement in acid base balance demonstrated in this patient suggests that bicarbonate hemodialysis may be useful in the therapy of patients with acute renal failure complicated by lactic acidosis.

93 HIGH DOSE INTRAVENOUS METHYLPREDNISOLONE (IVMP) VERSUS LOW DOSE ORAL PREDNISOLONE (OP) IN ACUTE RENAL ALLOGRAFT REJECTION IN CHILDREN. Orta-Sibu, N.,

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Few controlled trials of different anti-rejection protocols have been published, and none in children. We report a prospective, randomised study in which two steroids regimes were compared as regards (a) effectiveness and (b) incidence and severity of side effects. Treatment A was IVMP 600 mgs/m²/dose X 3 days; treatment B was OP 3 mgs/Kg/dose X 3 days. Background immunosuppression with azathioprine was continued; pre-treatment dosage of OP was resumed immediately after treatment. The diagnosis of acute rejection was made on one or more of the following: 10% rise in plasma creatinine, deterioration of renal perfusion as measured by dynamic 99mTc DTPA scan, and accepted clinical criteria. Transplant biopsy was not routinely used. Successful treatment was defined as restoration of pre-treatment values. Blood pressure, weight, and the occurrence of any ill effects attributable to the treatment were recorded. Both treatments appeared equally effective in reversing acute episodes of rejection. Toxicity was low, mainly transient fluid retention and hypertension. Treatment B avoided hospital visits and was preferred by patients; it was also very much cheaper. We found no evidence to justify continued use of IVMP.

96 PSYCHOLOGICAL ASSESSMENT OF PATIENTS WITH A DRAWING IN A PEDIATRIC HEMODIALYSIS UNIT.

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Eight children, four girls and four boys, aged 6 to 18 years, on chronic hemodialysis, were asked to draw a child undergoing hemodialysis therapy in a dialysis unit. The following parameters were evaluated: 1- Self appreciation (physical, emotional), 2- Relative importance of other persons (patients, parents, staff), 3- View of the dialysis unit.

Seven patients had a distorted body image. Seven patients drew a smiling face, indicating a desire to convey a good impression. Three patients drew themselves alone; only four patients showed nurses which in three illustrations were distant or rigid looking; no parents were illustrated. The dialysis environment was seldom drawn with occupational features, the bed or the kidney machine being the objects most prominent. The predominant colors utilized suggest opposition to authority or to the treatment regimen.

This study suggests that, in spite of all efforts invested to make pediatric dialysis as tolerable as possible, the dialysed child remains deeply anxious, isolated and defenseless when facing treatment.