

in confirming the diagnosis. Patients with thrombotic complications require urgent treatment under the supervision of a specialist. The treatment is supportive and consists of early mobilization, treatment of sepsis, prompt treatment of dehydration and cautious use of anticoagulants.

Hypertension

This may be noted at the onset of nephrotic syndrome or occur due to steroid toxicity. Therapy may be initiated with ACE inhibitors, calcium channel or beta adrenergic blockers.

Hypovolemia

This complication can occur due to unsupervised use of diuretics especially if accompanied by septicemia, diarrhea or vomiting. The diagnosis is suggested by the presence of hypotension, tachycardia, cold extremities and poor capillary refill. Blood levels of urea and uric acid are elevated. Some children might complain of moderate to severe abdominal pain. A rapid infusion of normal saline or plasma in a dose of 15-20 ml/kg, or albumin 1g/kg is essential. The blood pressure should be monitored carefully. Albumin should be used with caution if the child is hypertensive because of the risk of pulmonary edema. Once adequate hydration is achieved, but the child remains oliguric, a single dose of frusemide (1-2 mg/kg intravenously) may be given. In case no urine is passed despite these measures, the diagnosis of acute renal failure is suspected.

Metabolic bone disease

There is recent evidence that children with idiopathic nephrotic syndrome (INS) are at risk for metabolic bone disease (MBD) due to biochemical derangements caused by the renal disease, as well as steroid therapy. The risk is greater in those who receive higher doses of steroids (FR, SD and INR). Prophylactic calcium and vitamin D supplements help in minimizing the risk of low bone density in these children.

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LITERATURE REVIEW

Laparoscopic Kidney retrieval in donor with an extended criterion: Assessing the safety and outcome

Arvind R. Ganpule, Mahesh R. Desai and Shashikant Mishra. *Ann Natl Acad. Med Sci (India)*, 44 (3): 165-175, 2008.

There is an ever increasing need to accommodate deserving transplant recipients coupled with the relative paucity of active cadaver transplant programme. The terms extended donor criterion and marginal donors are confusing, they may simply mean usage of suboptimal quality cadaver renal grafts, non heart beating donors and living donors with some acceptable medical risks. We have identified old age, hypertension, diabetes mellitus, obesity, and anatomical anomalies such as multiple vessels and double ureters as extended indications for laparoscopic donor nephrectomy (LDN) as we feel these donors require consideration surgical/medical expertise and acumen to attain good results.

The term marginal kidney donor/extended donor criterion is not clearly defined. In the article we assess the safety and outcome of laparoscopic donor nephrectomy (LDN) in donors with an extended criterion. A retrospective analysis of our database was done to assess the outcome of extended donor. Analysis was done between normal donors (group 1) and donors with extended criterion (group 2). The parameters analyzed were pre and post operative serum creatinine in donors and recipients, serum creatinine at day 1, 7, 30 days and 1 year in recipients, operative time, warm ischemia time, analgesia requirement in donors and impact of extended criteria on recipient outcome. Group I and II recipients had comparable creatinine at 1 year. Donors with BMI more than 30 kg/m² required extended hospital stay. Recipient's creatinine, with single vs. multiple vessel donors was comparable at 1 year. Donors with urolithiasis had good recipient outcome. The donor creatinine was comparable in extended and non extended indication donors. In our study, LDN was found to be safe, feasible and efficacious in donors with extended indications such as old age, BMI more than 30, multiple vessels and anatomical anomalies. Recipient outcome for donors with normal vs. extended criteria was comparable at one year follow up. All donors with extended criterion had normal post operative creatinine levels at two years follow up; long term follow up would be of interest.

graft loss. Graft losses were significantly greater in patients who discontinued CsA (5/12 vs 2/22) as compared to those who continued CsA³.

PATIENT SURVIVAL

Patient survival is better in pediatric renal transplant recipients than adults. In most pediatric series, mortality rates have decreased in recent years¹³. In data from the North American Registry, seven-year patient survival exceeded 90 percent in all recipients of living related or cadaveric donors, other than 0- to 1-year-old recipients of cadaveric donor kidneys. Patient survival is higher for living related graft recipients than for cadaveric graft recipients. Patient survival is significantly lower for very young (<1y) recipients¹¹. Infant recipients of cadaveric kidneys have the highest mortality rate. The mortality is higher for very young children, and may vary with the underlying renal disease. As an example, the outcome after renal transplantation may be worse in children with lupus nephritis.

GROWTH

Most children have an improvement in statural growth after successful renal transplantation; however, complete catch-up growth is infrequent¹⁴. The most important factors limiting growth after renal transplantation are renal graft function and corticosteroid therapy: Catch-up growth is only observed with normal or nearly normal function of the allograft. Growth is impaired when the dose of corticosteroids is above 5 mg/m² per day. These agents interact with the growth hormone insulin-like growth hormone axis, and are therefore associated with decreased levels of growth hormone and insulin-like growth hormone activity. Children who receive living-related donor (LRD) grafts appear to have better growth compared to those who receive cadaveric (CAD) donor grafts¹⁵. Growth hormone can be used safely in children who are more than 1 year post transplant and have stable graft function. Recently there has been a tendency to use steroid free protocols/ steroid minimization. In our anecdotal experience they have resulted in significant gain in

height without any increased rejection rate.

Thus renal transplant has revolutionized the therapy of children with end stage kidney disease. From what once considered an experimental procedure, it has over the last 3 decades evolved as the gold standard for therapy of these children.

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LITERATURE REVIEW

Recovery of renal function after 90 days on dialysis: implications for transplantation in patients with potentially reversible causes of renal failure

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Late recovery of renal function in patients requiring dialysis is a well recognized but an uncommon phenomenon. Moves to increase the number of live donor transplants and the recognition that early transplantation is associated with better graft survival; it is possible that patients who are going to recover renal function may be transplanted unnecessarily. Prospective survey of patients receiving dialysis for more than 90 d in south west Scotland from 1 January 1994 to 31 December 2005. Routine measurement of residual renal function by combined urea and creatinine clearance allowed us to detect late recovery whenever this occurred. Eight of 202 (4%) patients recovered sufficient renal function to stop dialysing after 90-d treatment. The likely cause of the renal failure in five of these patients was atheroembolism. One with atherosclerotic renovascular disease had been stented and would have received a live related renal transplant had his sister not had second thoughts about the procedure. **Conclusion:** It may be sensible to postpone transplantation in patients with certain types of renal failure, perhaps particularly patients with renovascular disease who have recently undergone a failed revascularization procedure.