necrosis after perinatal shock, renal dysplasia in prune belly syndrome, neonatal Shigatoxin-associated hemolytic uremic syndrome, and bilateral nephrectomy in autosomal recessive polycystic kidney disease.

Results and Discussion: Initially, 3/4 patients were started with HDF. Reasons were abdominal surgery in two patients and presumed acute renal failure in one patient. Thereafter all patients were switched to PD. If complications occurred on PD, patients were switched back to HDF. In case of severe volume overload we started with cHDF and continued with iHDF. During the first year of life, 3/4 patients required 1 to 3 HDF rescue treatment periods (major abdominal surgery in 5 periods, recurrent peritonitis in 1 period). 1/4 patients had to be switched to maintenance iHDF due to multiple abdominal leaks at 8 months of age. All 4 patients survived the first year of life. One patient is on maintenance PD at 23 months. Two patients were transplanted successfully at 22 and 35 months, respectively.

In conclusion, in case of complications on PD, HDF is an option to achieve long-term survival and kidney transplantation.

1005

ONE YEAR CLINICAL EXPERIENCE WITH THE PRISMAFLEX HF 20 SET IN FOUR INFANTS

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Objective: We present the first clinical report involving use of the Prismaflex (Gambro) with the newly developed Prismaflex HF20 Set in 200 consecutive treatments for patients with end-stage renal disease (ESRD).

Patients: Four infants with ESRD (ages of 13, 10, 5, and 25 months, and with a body weight of 9.5 kg, 8.5, 6.5, and 9.5 kg, respectively) were treated with intermittent hemodiafiltration (HDF). All patients received five hour treatments. Treatment monitoring included weight change and fluid balance of

patients, the efficacy of treatment, the number of interventions, and machine alarms.

Results: We used blood flow rate 50 ml/min, dialysate fluid rate of 1000 ml/h and replacement fluid rates of 500 ml/h. Based on the precision of the Prismaflex scales, desired fluid balance was achieved according to the prescribed weight loss for the patients. The efficacy of treatment was monitored by BUN and creatinine values (55 ± 20 mg/dl and 5.3 ± 1.0 mg/dl, respectively) at start of treatment and their decrease after 4 hours of RRT (21 ± 8 mg/dl and 2.2 ± 0.6 mg/dl, respectively). At the start of treatment, urea and creatinine clearances were 23.3 ± 7.0 ml/min and 19.1 ± 4.4 ml/min, respectively. No complications during the HDF occurred.

Conclusion: This is the first report about the use of the Prismaflex HF20 Set in infants with ESRD. No side effects were detected, treatments were tolerated well in all patients, and adaptation of the flow rates to the infants' needs was good.

1006

NEPHROLITHIASIS DUE TO IDIOPATHIC HYPERCALCIURIA IN A 12 YEAR OLD BOY: CASE REPORT

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Introduction: Nephrolithiasis is recognized increasingly in children and inherited metabolic diseases are identified more frequently in children than in adults. The evaluation of a child with nephrolithiasis should be directed towards identifying physicochemical, anatomic and genetic factors predisposing to nephrolithiasis. Hypercalciuria is the most common metabolic cause of pediatric urinary calculi. In children with hypercalciuria the prevalence of urolithiasis in the family is 46-69%.

Methods: There is described the case of a 12-years-old non-Greek boy with short stature and history of recurrent nephrolithiasis since the age of 4 years old without further evaluation. Endocrinology tests for GH were normal and the bone age was markedly delayed. The kidneys ultrasound showed expanded nephrolithiasis. Hypercalciuria and hypocitraturia were revealed with normal serum calcium concentrations. In 24hours urine collection, oxalate was normal. PTH was normal. Bone mineral density was decreased.

Results: A dietary modification with low sodium diet and increased water uptake, in addition with thiazide diuretics and potassium citrate were recommended. In his follow-up a month later, calcium and citrate concentrations in 24hours urine collection were normal.

Conclusions: Hypercalciuria (40%) and hypocitraturia (38%) are the most common risk factors for the development of urolithiasis in children. The prognosis for nephrolithiasis depends on the primary diagnosis and adherence to therapy, but recurrence rates generally are high when the condition is left untreated.

1007

OSTEOPOROSIS AND BONE DISORDERS IN PAEDIATRIC RENAL TRANSPLANTATION RECIPIENTS

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Decreased bone mineral density (BMD) is common in renal transplantation recipients (RTR). Osteoporosis has a major role in morbidity in these patients. Risk factors for decreased bone mass include underlying renal disease, nutritional deficits, decreased physical activity, inflammation and immunosuppressive therapy.

We assessed the prevalence of osteoporosis and risk factors for bone disease in patients with at least 6 months post renal transplantation. The patients underwent clinical and laboratory evaluation, dual-energy X-ray absorptiometry (DXA) for BMD in lumbar spine (LS) and femoral neck. Low bone mineral density was defined by lumbar spine Z-scores less than or equal to -2 on DXA using the equipment-specific age, sex- and ethnicity - adjusted.

The study included 24 subjects who were between 7 and 18 years of age. The incidence of osteoporosis was 25% (6/24). We found 6 patients, all teenagers, 4/6 boys. Other bone disorders were 1 child with bone fracture, 1 *genu valgum* submitted to surgery and 1 femoral head avascular necrosis, but without osteoporosis diagnosed.

Four patients had PTH value >100 ng/liter, one of these with LS Z-score less than (-2). All were on triple drug immunosuppression with prednisolone, tacrolimus and mycophenolate mofetil

In conclusion, although DXA has several limitations it remains a good method for non-invasive and reproducible BMD assessment in children and young adults. Osteoporosis is a frequent complication and requires detection and treatment to reduce morbidity. The prevention of bone disorders is very important.

1008

BILATERAL RENAL VEIN THROMBOSIS IN A NEONATE

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A female neonate, 35 weeks of gestation of a G1P0AB0 Caucasian mother was born after an urgent caesarean section because of diminished fetal movements and fetal bradycardia.

A few days postnatally, the neonate developed macroscopic hematuria, anemia and thrombocytopenia.

Multiple ultrasounds were performed and showed an adrenal haemorrhage with bilateral renal vein thrombosis and associated thrombosis in the vena cava inferior.

The hematuria vanished after 2 weeks and there is still a normal renal function.

DMSA showed an atrophic left kidney (15%) with a compensatory enlargement of the right kidney.

After 5 months a MRI angiography demonstrate a small left kidney (4,5 cm) and a right kidney with a craniocaudal measurement of 7 cm. The vessel wall of both main renal arteries is normal. A collateral venous drainage of the underpole of the right kidney exists. This image is an affirmation of a complete obstruction of both renal veins. There is a complete obstruction in the vena cava inferior just above the ostium of the right renal collateral vessel with pronounced paralumbal veins and probably a more cranial drainage via the azygos system.