in various age groups, as well as the late outcome of the interventions.

Material and Methods: A total of 120 operations were performed on 114 children (6 children underwent bilateral operations) between the 1st of January 2000 and the 31st of May 2006. The cause of obstruction was congenital pyeloureteral stenosis in 75, a crossing vessel in 45 cases. Patients were divided into three age groups (I: <1 year, II: 1–5 years, III: >5 years). Long term follow-up (more than 3 years) including abdominal ultrasonography, intravenous urography and radioisotopic examinations was performed.

Results: The incidence of crossing vessel increased with age (Group I: 12%, Group II 43% Group III 53%). An Anderson-Hynes pyeloplasty was performed in 105 cases. Transection, transposition or hitch of the crossing vessel without pyeloplasty was sufficient in 7. Nephrectomy was done in eight children. Improvement in hydronephrosis and drainage occurred in 105 kidneys out of 112 (93.8%). Secondary nephrectomy or reoperation was required in 1 case, each. Transection of the lower pole artery did not result in significant loss of parenchyma according to follow-up investigations.

Conclusions: Neonatally or postnatally diagnosed hydronephrosis is caused by pyeloureteral stenosis in the majority of cases. Therefore, a negative ultrasonography of the infant does not preclude the possibility of a childhood hydronephrosis due to crossing vessels. In older children more than 50% of all hydronephrosis are caused by crossing vessels. This should be considered when the surgical plan is devised. In our opinion, vascular surgery without pyeloplasty is appropriate only in selected cases. Crossing vessels often lead to so-called "intermittent hydronephrosis", therefore in case of recurrent pain control abdominal ultrasonography is required when symptoms appear.

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Hinman-Allen syndrome: Is it safe to perform augmentation in high risk patients? A comparative study with long term follow-up

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Introduction and Objectives: Hinman-Allen syndrome is a rare and severe form of dysfunctional voiding mostly represents at school-age and can lead to renal failure. We aimed to compare the upper urinary tract status in a group of moderate-high risk patients with Hinman-Allen syndrome either treated by surgery or conservative therapy in the long-term follow-up.

Material and Methods: We retrospectively reviewed our experience in 67 children with non-neurogenic neurogenic bladder in up to a ten-year period and identified a subset of 22 patients who are at moderate-high risk for upper tract damage. No patients with evidence of a neurologic or obstructive lesion were included in the study. Radiological and urodynamic investigations revealed thick walled bladders with high pressure leading to an increased risk of upper tract deterioration with the absence of neurological disorder in all cases. Group 1 consisted of 8 patients who were surgically treated and group 2 was consisted of 14 patients who were approached conservatively. All patients were followed closely at 3-to-6-month intervals with serial physical examination, upper tract imaging and urine culture.

Results: Mean age on referral was 9.88±3.83 in group-1 and 8.79±3.14 in group-2 ($p = 0.267$). Mean follow-up was 64.0±25.9 and 52.8±13.4 months (30–120) in group-1 and group-2 respectively ($p = 0.365$). No significant difference was detected in urinary infection rates between both groups. No patient had new onset hydronephrosis, whereas renal deterioration, defined as cortical thinning or scarring on renal scan was present in 25% and 14.3% in group-1 and group-2 respectively ($p > 0.05$). Only 1 patient required dialysis in group 2 at the end of follow-up.

	Group 1 Mean±SD	Group 2 Mean±SD	p value
Age	9.88±3.83	8.79±3.14	0.267
Follow-up (month)	64.00±25.94	52.86±13.44	0.365
Asymptomatic UTI (n)	5.00±3.25	2.71±3.00	0.070
Symptomatic UTI (n)	1.00±1.07	0.93±1.64	0.525
Baseline creatinine (mg/dl)	1.77±1.55	1.20±1.02	0.145
Creatinine at the end of follow-up (mg/dl)	0.93±0.59	1.61±2.78	0.868

Conclusions: The main goal in the treatment of patients with non-neurogenic neurogenic bladder is to preserve upper urinary tract functions. Patients with Hinman-Allen syndrome who are refractory to conservative treatment or present with an advanced pathologic condition may require surgical intervention. We demonstrated that long-term follow-up results of augmentation cystoplasty are plausible and comparable with conservative therapy in moderate-high risk patients.