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### **Pediatric urolithiasis: what role does metabolic evaluation have to play?**

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**Objective:** Pediatric urolithiasis is a perplexing problem faced by pediatricians as well as urologists. The aim of this study was to evaluate the clinical, biochemical and metabolic characteristics of the patients and the interventions required to prevent recurrence.

**Materials-Methods:** This was a retrospective study done on all pediatric patients presenting with urolithiasis at our hospital from January 2007 to December 2013.

**Results:** We had a cohort of 29 patients (19 male and 10 female) with a mean age of 6.8 years at presentation (range 1-12 yrs). 55%(n-16) presented with pain whereas 27%(n-8) had hematuria. 41%(n-12) also had UTI. 28 patients(96%) had renal, 4 had ureteric and 1 had vesical stone at presentation. 5 patients had bilateral renal stones whereas 3 had bilateral staghorn calculi. 27% (n-8) patients also had renal failure. Metabolic evaluation was done in all children and 7(24%) had hypercalciuria, 23(79%) had hyperoxaluria, 7(24%) had high urinary uric acid levels and 7(24%) had hypocitraturia.

48%(n-14) were managed conservatively, 34%(n-10) underwent PCNL, 20%(n-6) had URS, whereas 1 each had pyelolithotomy and cystolithotomy. Potassium citrate was administered to all the patients, 7 patients with high urinary uric acid levels received allopurinol, 22 patients(75%) were on pyridoxine and 5 patients(17%) received thiazides.

27%(n-8) had stone recurrence during follow up and 5 of these had more than one metabolic abnormality. There were 5 patients who did not have any metabolic abnormality and none had a stone recurrence. Only 3 /14(21%) patients managed conservatively had stone recurrence whereas 5/15(33%) managed with a procedure had stone recurrence.

**Conclusions:** Patients having a metabolic abnormality are more likely to have stone recurrence. In our study, patients undergoing a procedure were found to have more recurrence. Metabolic evaluation is a must in all pediatric patients as it helps in segregating patients needing medical therapy.