PP-085

Childhood bladder stones... Endemic disease of developing countries

B. Lal[1], J.P. Paryani[2], S.-U.-R. Memon[2]

[1] *District Headquarter Hospital, Mithi, Pakistan*

[2] *Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan*

Objective: To describe the associated aetiological risk factors and management of childhood bladder calculi at rural setting.

Material and Methods: All children of bladder stones operated at district head quarter hospital Mithi from July 2009 to June 2012 included in study. Data was collected regarding age, sex, address (rural or urban), body weight, duration of breast feeding, weaning, detailed dietary history includes type of food (cereals, proteins, vegetables, fruits) and milk type (cow, goat, buffalo), amount (glasses of milk per day), amount of water intake (assessed by no of glasses taken in a day), type of water hard or soft, dehydration, recurrent diarrhea, UTI, family history and socioeconomic history. Urine analysis, CBC, renal function, ultra sound abdomen, X- ray KUB was done in all patients. All patients had Cystolithotomy. Bladder closed in two layers without drain. Catheter removed on 3rd or 4th post-operative day depends upon the recovery and discharged on same day. Increase fluid intake advised to all patients.

Results: Out of 113 children, 97 males and 16 females operated at district head quarter hospital Mithi Tharparker were included in study. All patients belong to local area desert Tharparker. Age ranges from 18months to 14 year (mean age 8.6 year). Most frequent symptom was difficulty in micturation (crying duration micturation) in 76 (67.25%) patients, urinary retention in 18 (15.9%) and stone with pyuria and fever in 12 (10.6%) patients. Parental interview disclosed breast feeding in all for 1-2 year, weaning started at 6-8 months but not properly because of cultural pattern. They add mostly wheat or Bajra roti with tea or Lassi, Khichri and Sabu Dana. Milk commonly used was taken from goat followed by cow. Water is not frequently available in desert area. Recurrent episodes of diarrhea (more than 3 episodes per year) in 73(65%) patients, recurrent UTI in 51 (45.6%), family history of stone disease in 6 (5%) and associated rectal prolapse in 3(2.6%) patients. On x- ray KUB 111 (98%) patients have single stone in bladder, 2 (2%) had multiple stones and an associated renal and ureteric stone in 5 (4.5%). Stone size range from 1 to 4 cm with mean of 2.5cm. Urine analysis showed red cells in 95% patients, pus cells in 48% and albumin in 5%. Mild anemia (Hb 7-10gm %) was seen in 35 (39.55%) patients, moderate anemia (Hb 5-7gm %) was seen in 21(24%) and severe anemia (Hb less than 5 gm %) was seen in 14 (16%) patients. All patients had open cystolithotomy for removal of stones under general anesthesia. Bladder closed in two layers without putting drain. Foley catheter 10 or 12 Fr placed for 4 days. Postoperative complications like hematuria occurred in 3, suprapubic leakage in 1, urinary retention after catheter removal in 4 and wound infection in 10 patients.

Conclusion: Paediatric endemic bladder stones are still a big health problem in developing countries.

Majority of affected children were boys.

Majority of affected patients were less than 5 years old.

Low protein diet, dehydration, use of goat milk and poor socio-economic conditions were major risk factors identified for development of endemic bladder stones.

No recurrence was found in endemic bladder stone at 3 year follow up.

As published in the *Supplement of AFJU, Volume 18 (2012), 1st ESD "Experts in Stone Disease" Conference* (page 62)