
**Retention of Urine
in Children**

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Key Words

Retention urine, Posterior urethral valves, Diverticulum of bladder, Stricture urethra.

Summary

Urinary retention in children has wide variety of causes. In adult patients there are few causes with straight-forward diagnosis and management. Diagnosis in children needs careful history, examination and methodical investigations.

At Paediatric Surgery Unit, P.G.M.I., L.R.H. Peshawar, we received 2-3 referrals every week to be in retention of urine. One out of four of these children did not have retention and these mainly consisted of new-borns within the first 24-48 hours.

One hundred and three cases with actual retention presented at Paediatric Surgery Unit in the last year. The main groups of patients had Posterior urethral valves (21), Stone urethra (32), Diverticulum of bladder (6), Intra-pelvic tumours (8), and Post-traumatic rupture in 12 cases. Mortality was in two cases due to septicaemia: one after diverticulum resection and the other after dilatation of urethra done in periphery hospital, which could not be diagnosed. Morbidity was mainly in cases where dilatation was done without proper diagnosis and investigations. Successful management of these children needs careful approach to individual patient.

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Material and Methods

Between June 1990 and May 1991, one hundred and three cases of retention urine were seen in Paediatric Surgery Unit, LRH, Peshawar.

Urethral valves caused retention in 21 cases. Thirteen cases presented in neonatal age, while 8 cases presented at age varying from few months to 8 years. Micturating cysto-urethrogram and cystoscopy were used for investigations. Treatment was by Fogharty and Foley's Catheter Balloon tractions.

Stone urethra caused retention in 32 cases. Eighteen children were able to pass the stones without any intervention within 24- 48 hours after admission. Xylocain jelly, sedation and analgesics were used to facilitate the passage of stone. Meatotomy was needed for removal in seven cases of stones stuck in the meatus. Three stones were removed through urethrotomy which were stuck in anterior penile urethra. Four stones in the posterior urethra and 7 in the bladder neck were removed through vesico-lithotomy after pushing these stones into the bladder.

Post-traumatic rupture of urethra caused retention in 12 cases. Rail-road method was used in most of these cases. Stricture of urethra developed in all the cases. Improvement was achieved by repeated dilatations in all cases except two, which were sent for resectoscopic urethrotomies.

Intra-pelvic tumours led to retention in 8 cases. Rhabdomyosarcoma was responsible in three cases. Perineal biopsy in one case while open biopsies per laparotomy in other two cases confirmed diagnosis. These cases were referred to Institute of Radio- therapy and Nuclear Medicine (IRNUM), Peshawar for further management by radio/chemotherapy. Intra-pelvic sacrococcygeal Teratoma in 4 cases and duplication of gut in the pelvis in one case were excised through laparotomy.

Bladder diverticulum in 5 cases and urethral diverticulum in one case caused retention. Four of the bladder diverticulum were congenital in nature and one was acquired which contained multiple stones. These diverticulae

were resected from within and outside dissection of the bladder. Ureters were opening into diverticulae in the congenital type which were reimplanted into the bladder. Cohen's method of reimplantation was used in two cases, whereas Lead Better Palitano method was used in the other two cases.

Chronic constipation, neurogenic bladder, complications of circumcision and post-urethral dilatation were other causes of retention.

Phimosis, paraaphimosis, hypospadias and meatal stenosis presented with difficulty in passing urine but none caused retention.

Discussion

Retention of urine in children has wide range of causes needing systematic approach. History from the parents will give clue to the nature of problem and its duration. Plain X-ray abdomen will show the size and site of stone urethra. Palpation of stones in anterior urethra is mandatory, as sometimes these may not be seen in X-rays.

Management of stricture urethra with dilatation was easy after Rail-road method of catheterization than supra-pubic catheterization and doing dilatation of stricture later on. Resectoscopic urethrotomy may be superior in the later case.

Posterior urethral valves at later stage and diverticulae of bladder are difficult cases to be diagnosed. There was increased morbidity in this group of cases, where laparotomy in two cases and blind dilatations in 8 cases was done. Bleeding from urethra, false passages and strictures were complications from these interventions. Primary stricture of urethra was not found in this series.

Our advice for cases not apparent on clinical examination and X-ray abdomen is to do urethroscopy, anterior urethrogram and micturating cysto-urethrogram rather than blind intervention.

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