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## A Rare Reason of Pediatric Urolithiasis: Urethral Stone

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### Introduction

Renal stone disease is a significant health problem and can be seen among all ages with an increasing incidence. Pediatric urolithiasis (PU) is prevalent in some geographical regions popularly known as the stone belt<sup>1</sup>. Many factors are responsible for this endemic nature such as magnesium, phosphates, low protein and high-carbohydrate diet, dehydration, urinary tract infection etc<sup>2</sup>. The incidence and clinical characteristics of urinary calculi in children vary in relation to geographical location and historical periods that related to climate, genetic, socio-economical factors and dietary factors<sup>3-5</sup>. The %30-85 of PU cases are related to underlying metabolic abnormalities<sup>6</sup>.

The major clinic presentation is renal colic in adolescents as adults. However, abdominal pain is the main complaint in school children<sup>7</sup>. Gross or microscopic hematuria appears in 30% to 55% of all PU. Lower urinary tract symptoms, i.e., dysuria, urinary retention, enuresis, urinary incontinence and pollakiuria, may be associated with distal displacement of calculi. Excessive manipulation of genitalia in preschool children may be an early sign of urethral lithiasis<sup>8</sup>.

While the location of the stone is mostly in the upper urinary tract in developed countries, bladder stones causing bladder outlet obstruction is seen in developing countries<sup>9</sup>. Urethral stones are rarely detected compare to other locations<sup>10</sup>. Herein, we report a child who presented with urinary retention secondary to urethral stone.

### Case

4 years old boy was admitted with a complaint of difficulty starting urine stream for 2 months. His medical history was unremarkable trauma, surgical procedure, constipation, encopresis and recurrent urinary tract infection. On admission, His height and weight percentile was in the normal range for his age. Physical examination was normal except supra-pubic tenderness and fullness suggesting a palpable distended bladder. His kidney functions tests were normal. Kidney, ureter and bladder ultrasound showed revealed glob vesicle and a 7.5 mm hyperechoic mass resembling stone in proximal urethra. The proximal urethral stone and glob vesicale were confirmed on CT scan. Because of the location of calculi, stone was pushed into the bladder using cystoscope and broken into smaller fragments, and removed from bladder.

### Discussion and conclusion

Acute urinary retention is very common among the pediatric age affected by urethral calculi<sup>11</sup>. Usually urethral stones are observed in the anterior portion of the urethra and less in the posterior portion<sup>12</sup>.

Urethral calculi are divided into two types namely primary (when formed within urethra due to some anatomical defect) or secondary (when a stone from upper urinary tract or bladder gets lodged into urethra). These are called migratory stones<sup>12</sup>. Calcium oxalate stones are

commonly reported as most common type of stones in many series<sup>13-15</sup>. As we see in our case urethra stones may cause obstruction in proximal portion of urethra.

Although the management of the urethra calculi is based the location of stone, initial treatment may be suprapubic urine drainage for urgent relief in some of patients. If the stone located in the posterior portion of urethra or bulbous urethra we can push the calculi into the bladder and use the procedure named endoscopic vesicolithotomy. If the stone is located in penil urethra we can do fossa navicularis meatotomy or first we can try to milking the stone from penil shaft. Another option may be urethrolithotomy in case of failing previous procedures<sup>16</sup>.

**Key Words:** *Glob vesicale; paediatric; urethral stone*

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