Commentary

Two rare pathologies of male urethra in children

The authors presented two patients with anterior urethral diverticulum and syringocele of the Cowper's duct managed by open diverticular repair and endoscopic unroofing with successfully, respectively. These anomalies are two different pathologies of the male urethra and rarely seen in children. Those patients often have nonspecific symptoms which contribute to the delay in diagnosis.

Most children with anterior urethral diverticulum have nonspecific urinary symptoms such as poor urinary stream, post-void dribbling, difficulty in micturition, urinary tract infection, enuresis or hematuria. Small diverticula may remain asymptomatic. Cystic swelling on the ventral surface of the penis and firm penile mass due to stone formation are most specific symptoms and signs of the urethral diverticula. Therefore, the first patient's symptom was not atypical. Some patients especially small children or neonates present with signs and symptoms of the severe urinary tract obstruction or obstructive uremia.[1] Older children may present with less severe symptoms.[2]

The patients with Cowper's syringocele may present with urinary tract infection, obstructive voiding symptoms, post-void dribbling, hematuria or dysuria. So the presentation of second patient was not atypical. Silveri *et al*. reported an infant with severe infravesical obstruction caused by ruptured Cowper's syringocele.[3] However majority of the patients with Cowper's syringocele remain asymptomatic in childhood period.

Anterior urethral diverticula and Cowper's syringocele should always be kept in mind during evaluation of a boy with lower urinary tract symptoms. In patients with urethral anomaly suspicion, initial imaging study should be ultrasound. Perineal and detailed urinary system ultrasounds reveal proximal urethral diverticula and changes of urinary bladder and upper urinary tract. The diagnosis of anterior urethral diverticulum or Cowper's syringocele is made by retrograde urethrography, voiding cystourethrography and cystourethroscopy. Second patient showed us that if radiological studies aren't completed properly or cystoscopy isn't performed carefully, misdiagnosis is always possible.

Cystourethroscopy is essential to confirm diagnosis and plan treatment. There are many treatment options based on the patient's condition. Small and asymptomatic lesions may be

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followed clinically. During cystourethroscopy endoscopic treatment of diverticulum, Cowper's syringocele may be performed. In patients with symptomatic syringocele endoscopic unroofing can be performed. Anterior urethral valve or distal lip of the diverticulum can be removed or destroyed by various endoscopic methods. Relationship between anterior urethral diverticula and anterior urethral valves are unclear. In the case of anterior urethral diverticulum presented with anterior urethral valve, it is difficult to understand which one is the primary lesion. If the diverticulum is secondary to valve or small after endoscopic treatment diverticulum will resolve spontaneously. Large and symptomatic diverticula and the diverticula which persisted after endoscopic treatment are candidates to open diverticulectomy. Open excision of syringocele or transperineal ligation of the Cowper's duct can be performed in patients with large syringocele and the patients who present with persistent symptoms after unroofing.[4] In small children and neonates with severe infravesical obstruction and children with gross pyuria can be treated by vesicostomy and marsupialisation before definitive surgery, respectively.[2,5]

This article important as it highlights two unusual conditions of pediatric urology.

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