

LETTER TO EDITOR

TUBERCULOSIS OF URINARY BLADDER PRESENTING AS PSEUDOURETEROCELE

Sir,

A 35-year-old man presented with recurrent episodes of hematuria, increased frequency of urination and occasional mild dysuria of 1 year duration. There was no fever, weight loss, or loss of appetite. Ultrasound examination showed mild dilatation of intramural portion of the left terminal ureter projecting into the lumen of the bladder (Fig. 1). The wall of the dilated intramural ureter was irregular with few internal echos. There was no change in size of the lesion on real time scanning. No obvious sonological abnormality was seen in the kidneys. Plain radiographs of chest and abdomen were normal. Urine microscopy showed plenty of white blood cells and 10–15 red blood cells. No organism was grown in the routine cultures. Other investigations, including

haemoglobin, erythrocyte sedimentation rate, leucocyte count, blood sugar, and serum creatinine, showed normal results. On cystoscopy, bladder wall was erythematous and edematous with involvement of left ureteric orifice. Inflammatory exudate was seen at ureterovesical junction. Biopsy from the bladder wall adjacent to the left ureteric orifice revealed chronic granulomatous inflammation consistent with tuberculosis [Figure 2]. He was given antituberculous therapy. Follow-up ultrasound examination done after 6 months showed resolution of the pseudoureterocele and the patient was asymptomatic.

Ureterocele is obstructive cystic dilatations of the intravesical or intramural portion of the ureter that result in ballooning of the distal ureter into the bladder.^[1] Ureterocele is one of the common incidental observations at sonography on asymptomatic patients. On sonography, they appear as a well-defined

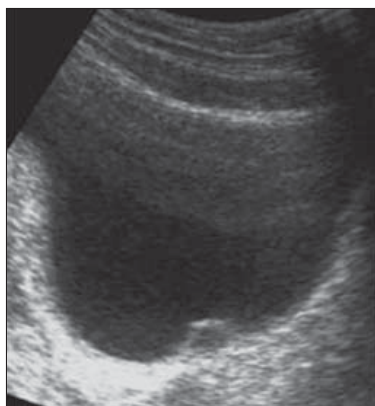


Figure 1: Ultrasound oblique view of the bladder showing pseudoureterocele with irregular wall and few internal echos

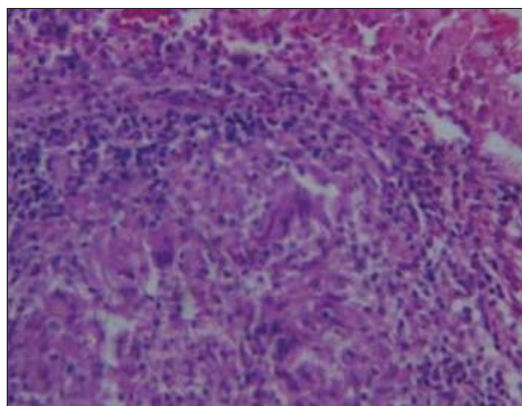


Figure 2: Photomicrograph from the bladder mucosa adjacent to the ureteric orifice showing tuberculous granulomatous cells with caseation

round-cyst-like structure within the bladder called cyst within cyst appearance. The wall of the ureterocele is thin and smooth. It may change the size in relation to the ureteric peristalsis. Many conditions mimic ureterocele and are grouped as pseudoureteroceles. Pseudoureterocele is defined as dilatation of the intravesical ureter in response to contiguous disease.^[1] The wall of the pseudoureterocele is thick and irregular. On intravenous urography, appearance of the radiolucent wall surrounding the dilated distal ureteral segment is an important differentiating point between an ureterocele and a pseudoureterocele. The lucency or halo surrounding a pseudoureterocele is thicker than that of an ureterocele and is poorly defined.^[2] Causes of pseudoureteroceles include radiolucent calculus, bullous edema of trigone, Mullerian duct cyst, steinstrasse following shock wave lithotripsy, an ectopic ureter, and infiltrative tumor.^{[1],[2]} Imaging features on intravenous pyelography (IVP) and Ultrasound allows differentiation of Pseudoureterocele from ureterocele in most situations, though cystoscopy would be required for confirmation.

We report an unusual presentation of tuberculous infection involving the urinary bladder and terminal ureter presenting as pseudoureterocele on ultrasound. Urographic

features of a few similar cases have been reported in the literature previously.^[3] To the best of our knowledge, there are no case reports describing sonographic findings of tuberculous pseudoureterocele. In conclusion, chronic inflammatory conditions like tuberculosis should be considered in the differential diagnoses of pseudoureterocele, especially in developing countries like India, where tuberculous infection is common. Whenever the wall of the ureterocele is thickened or irregular on sonography, pseudoureterocele is a possibility and mandates further investigation with cystoscopy to establish the diagnosis.

A. RAO, K. YVETTE, N. CHACKO¹

Departments of Radiodiagnosis and Urology,¹ Christian Medical College, Vellore - 632004, Tamilnadu, India. E-mail: ankammarao@yahoo.co.in

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