

LESSON OF THE MONTH

Acute urinary retention: an unusual presentation of acute appendicitis in a 3 year old boy

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We report acute appendicitis presenting as acute urinary retention in a 3½ year old boy, admitted with a four day history of central abdominal pain associated with diarrhoea but no urinary symptoms. He was afebrile, hydrated, with mild tenderness in the suprapubic region. He developed dysuria and went into acute urinary retention confirmed by an ultrasound scan that also showed moderate hydronephrosis. Passage of a urethral catheter relieved his symptoms and when, 12 hours later the catheter fell out, he was able to pass 175 ml of urine spontaneously.

The child was transferred to the care of a paediatric urologist at a tertiary centre. Cystoscopy suggested a pelvic tumour arising on the right, extending to the midline with extensive

involvement of the rectum. A suprapubic catheter was inserted to decompress the bladder. A computed tomography (CT) scan confirmed an enhancing pelvic mass related to the bowel (figs 1 and 2). At laparotomy he was found to have a perforated pelvic appendix, walled off by the bladder, sigmoid colon, and rectum. An appendicectomy was performed and four days later an ultrasound scan showed the hydronephrosis had almost resolved.

Initial laboratory investigations showed biochemical values within the normal ranges. Serial full blood counts revealed a rising total white cell count to $20.8 \times 10^9/l$ with a neutrophilia and a rising thrombocytosis (platelet count $704 \times 10^9/l$). These improved preoperatively. Urine and stool cultures were negative. The child was recovering well when reviewed in the outpatient clinic three weeks after appendicectomy. A follow up ultrasound showed complete resolution of the hydronephrosis.

Discussion

Little has been published about this unusual presentation of appendicitis. Noble and colleagues¹ reported a similar case in 1990 and reviewed seven paediatric cases reported between 1932 and 1985. Most were male and an appendiceal abscess was the cause of the urinary retention. Noble *et al* highlighted the problems of delayed diagnosis and the need for repeat clinical abdominal examination after bladder decompression to elicit any subtler signs which might be present.

It is increasingly becoming a role of general paediatricians, particularly in district general hospitals, to accept acute referrals of young children with symptoms which might require surgery, such as abdominal pain and urinary retention. If children requiring prompt surgical attention are to be quickly and appropriately referred on to surgical teams it is important for receiving paediatricians to be aware of differential diagnoses. Urinary retention is uncommon in children, especially the young, and the diagnosis of appendicitis must be considered. In our case an abdominal and pelvic ultrasound scan did not show the cause of the urinary retention. If there is any doubt as to diagnosis, an abdominal CT is the investigation of choice to look for an appendiceal mass.

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1 Noble J, Culkin DJ, Willis S, Venable DD, Mata JA. Acute urinary retention in a child with appendiceal abscess: diagnostic dilemma. *Urology* 1990;36:513-15.

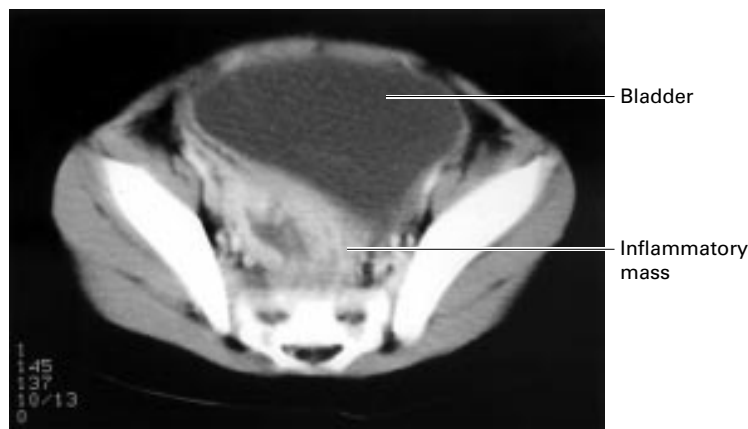


Figure 1 CT scan shows an enlarged bladder with an obstructed neck caused by an inflammatory mass posteriorly.

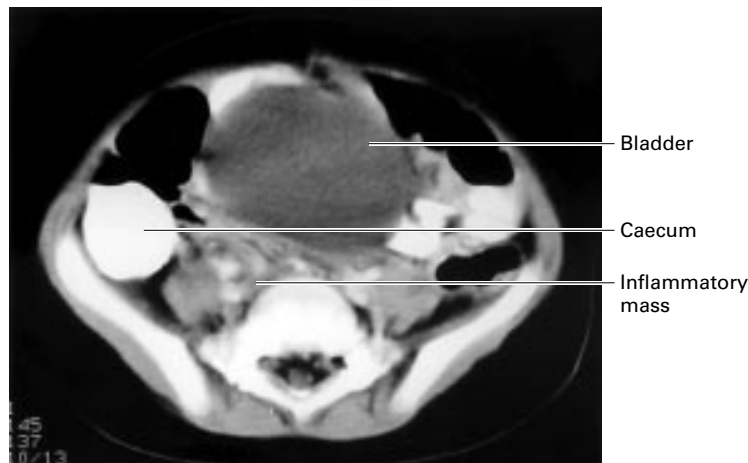


Figure 2 CT scan shows the relation of the inflammatory mass to the bowel. The caecum contains contrast and is dilated.