

Christmas Tree on Excretory Urography

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BRIEF HISTORY

A 75-year-old Taiwanese male visited the outpatient clinic over a month-long period with lower abdominal discomfort after urgency and voiding difficulty for several years. No fever or flank pain was associated with it and no previous history of trauma, cerebrovascular accident or any spinal procedure was noted.

CLINICAL EXAMINATION

Physical examination revealed an ovoid lower abdomen with mild suprapubic tenderness. Digital rectal examination revealed a markedly enlarged prostate. Renal ultrasound did not show hydronephrosis. The serum creatinine was 1.3 ng per dl. Urinalysis revealed mild hematuria but no pyuria.

INTRAVENOUS UROGRAPHY

An excretory urography to check for hematuria disclosed an impressive Christmas tree urinary bladder without hydronephrosis (Fig. 1).

DIAGNOSIS AND MANAGEMENT

The serum PSA level was 4.3 ng/mL. Uroflowmetry suggested decreased flow rate and an obstructive pattern. He received an alpha-blocker for bladder outlet obstruction due to prostate enlargement and the symptoms resolved.

Microscopic hematuria is one of the most common presentations in the urology outpatient clinic. Urolithiasis, urothelial carcinoma arising from the renal pelvis, ureter or urinary bladder and prostate bleeding are the most common clinical differential diagnoses. Excretory urography is an important diagnostic modality providing many clues for establishing a diagnosis. Our patient's lower urinary tract symptoms progressed over several years, however, he had not sought any treatment. The specific image confirmed diagnosis of neuropathic bladder. Primary neurological evaluation, including mental status, cutaneous and motor reflexes, and bulbocavernosus reflex were not abnormal. There was no history of neurological disorders, spinal procedures, or cerebrovascular accidents. It is well established that prolonged bladder outlet obstruction can lead to idiopathic detrusor



Fig. 1. This excretory urography showed a urinary bladder with a contour of Christmas tree appearance.

overactivity and trabeculation of the bladder wall, which then proceed to become neuropathic bladder [1]. Images of this extreme can remind us that bladder outlet obstruction due to benign prostatic enlargement may result in irreversible damage to the detrusor and bladder dysfunction.

REFERENCE

1. Knutson T, Edlund C, Fall M, Dahlstrand C: BPH with coexisting overactive bladder dysfunction--an everyday urological dilemma. *NeuroUrol Urodyn* 2001; **20**:237-247.