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### Clinical Image

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## Christmas tree bladder in chronic urinary tract stenosis

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#### Description

A 74-year-old man presented to the hospital with a chief complaint of anorexia and malaise, which appeared 1 month earlier and had gradually worsened. He had no contributive medical history or medications of note. Blood tests revealed acute renal failure, which was suspected to be caused by urinary retention due to a prostate tumor. Computed tomography (CT) and magnetic resonance imaging (MRI) scans at the time of examination are shown in Figure 1. The patient urinated promptly after insertion of a urethral catheter. We suspected benign prostatic hyperplasia (BPH) as the etiology of urinary retention. Imaging showed that the prostate protruded toward the bladder, and BPH or prostatic malignancy was suspected as the cause, which will be investigated further. A marked medial meatus formation was seen on the bladder, suggesting chronic urinary retention, and imaging studies showed a Christmas tree-like bladder. After lifting the urinary retention, a rapid general improvement in he patient's condition was observed.

His bladder was vertically elongated, with irregular contours due to granulation column formation, diverticula and upper urinary tract dilatation. Such a bladder is called a Christmas tree bladder or pine cone bladder. It is mainly caused by neurogenic bladder (spasmodic voiding muscle hyperreflexia) due to disorders of upper motor neurons, and rarely by urinary retention alone, as in this case [1]. The most common underlying causes of neurogenic bladder are brain disease, traumatic spinal cord injury, and spinal dysraphism, none of which were present in this patient [2,3].

#### References

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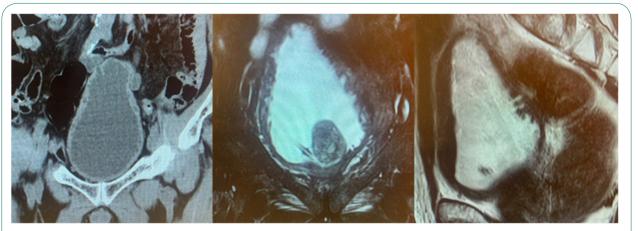


Figure 1: Left: CT (coronal section); center: MRI (coronal section); right: MRI (sagittal section). "Christmas tree bladder" is seen.

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