Oncology

Small cell lung cancer initially presenting with acute urinary retention: A case report

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ABSTRACT

This case study discusses a patient presenting with urinary retention presumed secondary to benign prostatic hyperplasia (BPH). Suspicion for an underlying problem was raised when a second instance of urinary retention occurred after undergoing medical treatment and TUVP to correct BPH. Extensive workup resulted in diagnosis of small cell lung carcinoma with metastases and discovery of a large metastatic mass in the rectovesical pouch. The mass caused obstructive uropathy and renal failure which was managed with stenting and an indwelling catheter. Further investigation by practitioners may be required in patients whose urinary symptoms do not improve after standard BPH treatments.

Introduction

The leading cause of cancer-related deaths around the world continues to be lung cancer in both men and women. Small cell lung cancer (SCLC) is an aggressive cancer of neuroendocrine origin that accounts for approximately 13–15% of newly diagnosed cases of lung cancer worldwide. SCLC is known for its rapid metastasis with 60%–70% of patients presenting with distant metastases at the time of diagnosis. Particularly, the most common sites of SCLC metastasis are bone, liver, brain, and adrenal gland. In this report, we discuss a patient with small cell lung cancer that initially presented as acute urinary retention.

Case report

A 62-year-old male with a history of benign prostatic hyperplasia (BPH) presented to the emergency department with abdominal pain. A CT abdomen/pelvis was performed, and the only abnormality seen at the time was significant bladder distention. A Foley catheterization yielded gross hematuria, which was temporally related to multiple unsuccessful attempts by ER staff to insert the catheter. The patient had no prior history of hematuria. Despite the traumatic catheterization, his urinary retention was relieved. The Foley was maintained, and the patient was referred to outpatient urology where he was evaluated several days later. No significant clots were noted on Foley irrigation. Since his episode of hematuria in the ER appeared to be secondary to the multiple failed catheterization attempts and resolved quickly, cystoscopy was not performed to further assess in this case. The catheter was removed. The patient’s history of BPH was confirmed by digital rectal exam (DRE) and transrectal ultrasound and was presumed to be the cause of his urinary retention.

He was started on tamsulosin and finasteride but continued to experience bladder fullness, frequency, and hesitancy so transurethral vaporization of the prostate (TUVP) was planned.

TUVP was performed six weeks after his initial ER visit. The procedure was solely vaporization and yielded no tissue chips. The patient was discharged after a successful trial of voiding. A bladder scan performed at follow-up showed no residual urine. A month later he developed significant nausea, lethargy, and lower back pain. A bladder scan again showed urinary retention. Creatinine was 4.9 and the patient was hospitalized for renal failure where he required emergency hemodialysis. Nephrostomy tubes were placed bilaterally with significant improvement in renal function. Non-contrast CT of the abdomen and pelvis showed mild bilateral hydronephrosis, hepaticomegaly with multiple liver nodules, and a large rectovesical mass (7.7 × 6.0 × 3.2 cm) which caused obstructive uropathy and renal failure (Fig. 1).

Once stable, the patient was discharged and extensive CT imaging was obtained following full recovery of renal function. Imaging exhibited multiple pulmonary nodules and bone lesions in addition to the previously seen liver nodules and rectovesical mass. Subsequent
percutaneous biopsies of the lung, rectovesical, and liver lesions revealed primary small cell lung carcinoma with multiple metastases, and combination chemotherapy was begun. He responded to chemotherapy very well, with rapid size reduction of the rectovesical mass (Fig. 2). Urological management consisted of Foley catheter and bilateral ureteric stent placement with regular follow-up.

Discussion

While there are some reports of SCLC metastasis to the rectum, a tumor of the rectovesical pouch manifesting as urinary retention with ureteral obstruction and renal failure has not been previously described. In this case, urinary retention was the first symptom the patient experienced because of the large mass between his bladder and rectum. Due to the unusual nature of this case, diagnosis of the patient’s lung cancer was somewhat convoluted. His past history of BPH and the fact that the rectovesical mass was undetectable on DRE, US, and initial CT led to a TUVP, which is the gold standard for surgical BPH treatment. A repeat episode of urinary retention was recognized by urology to be highly unlikely one month after TUVP, as retention is typically an early complication and even then only occurs in a small percentage of patients. This prompted further investigation by urology, leading to an unexpected diagnosis. Although this presentation of SCLC has not been reported previously, indwelling Foley catheter placement was thought to be the best urological management for the patient. The tumor burden in this region was reduced significantly in response to the lung carcinoma chemotherapy. Future plans for management include stent removal and trial of void given the positive chemotherapy response. Overall, this was an atypical presentation of lung cancer but demonstrated the importance of urologic investigation in unusual and persistent cases of urinary retention.

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