Oncology

Urothelial carcinoma of the bladder with abnormal inguinal metastasis: A case report

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ABSTRACT

Bladder cancer metastasis to the inguinal lymph nodes is a rare event. We report a case of a 73 years old male patient, known case of hypertension, diabetes, and bladder cancer. He was admitted to King Faisal Specialist Hospital (KFSHRC) in Riyadh, Saudi Arabia under urology department. He has a history of urinary retention and dialysis due to obstructive uropathy, right hydrocelectomy, multiple transurethral resection of bladder tumor (TURBT) chips, partial cystectomy, and right inguinal lymph node biopsy. Later on, he was found to have a urethral tumor, which was diagnosed by a biopsy, along with inguinal lymph nodes metastasis.

Introduction

According to a study done in 2014, bladder cancer was ranked 13th among the most common cancers diagnosed in Saudi Arabia, affecting older men more than women.1 Bladder cancer is mostly an environmental disease. The best-established risk factors are: cigarette smoking, occupational exposures, water arsenic, Schistosoma haematobium infestation, and treatment with cyclophosphamide chemotherapy. Bladder cancer is composed of three different histological components: Transitional cell carcinoma (TCC), squamous cell carcinoma (SCC), and adenocarcinoma. Bladder cancer usually metastasizes to pelvic lymph nodes. Only a few cases of primary metastasis to inguinal lymph nodes have been reported. We will review a case of transitional cell carcinoma of a high grade invasive papillary growth with primary metastasis to inguinal lymph nodes.

Case report

A 73 years old male was referred from National Guard Hospital in Riyadh, Saudi Arabia to King Faisal Specialist Hospital and Research Center in Riyadh, Saudi Arabia on the 18th of December 2018 for further evaluation of bladder cancer. He is a known case of diabetes mellitus type 2, hypertension, and bladder cancer. He has a history of urinary retention, and dialysis due to obstructive uropathy. The patient underwent multiple transurethral resection of bladder tumor (TURBT) chips, a partial cystectomy, right hydrocelectomy, and right inguinal lymph node biopsy. The urinary bladder tumor was reported as high-grade lamina propria-invasive papillary urothelial carcinoma. Cystoscopy and biopsy of the urethra showed a urethral lesion, T1 high-grade urothelial cell carcinoma with no muscle invasion (Fig. 1, Fig. 2). Biopsy of the right inguinal lymph node showed metastatic carcinoma consistent with metastatic urothelial carcinoma (Fig. 3).

Later, the patient presented with a failed voiding attempt, for which a Foley’s catheter was inserted upon admission, and MRI of abdomen/pelvis was ordered. MRI showed a focal intraluminal polyoid mural lesion originating from the anterior fundal urinary wall, likely representing known bladder cancer. The disease is confined to the wall of the bladder with bilateral suspicious enlarged inguinal lymph nodes measuring 2.6 cm in short axis. No signs of intra-abdominal or pelvic metastasis (T2 N2 Mx).

The patient was started on chemotherapy (gemcitabine/Carboplatin) and was set to be re-evaluated for surgical resection. A total of two cycles of chemotherapy was given.

Discussion

Almost 90% of bladder cancers are TCC, and in all cases of bladder cancer metastasis, 69% would metastasize to lymph nodes.2 Bladder cancer normally metastasizes to the internal iliac and obturator lymph nodes. Rarely would it metastasize to the inguinal lymph nodes, as in the
One theory that might explain this incidence is metastasis directly from the bladder wall if it perforates during transurethral resection (TUR). In this case, perforation of the bladder wall did not happen. Another theory that was reported in the literature is a recurrence, as well as coexisting cancer in the urethra, that can cause metastasis to inguinal lymph nodes. Recurrence of cancer in fossa navicularis of the urethra was reported from a patient who had a history of several bladder tumors 12 years ago. The histopathology result was confirmatory for transitional cell carcinoma. The newly recurrence had positive metastasis to bilateral lymph nodes. Another case was reported with inguinal lymphadenopathy and metastasis was in a patient with cancer of unknown primary origin. Both transitional cell carcinoma and squamous cell carcinoma were found in the patient’s histopathology result. One of the theories explaining the metastasis in this case was retrograde seeding, which is caused by the exfoliation of cancer cells that eventually lead to floating of the cells in urine, followed by backward pressure and leading to retrograde seeding. Looking back at our case, this is not likely to be the cause of metastasis in this patient. Our findings strongly suggest that our patient’s inguinal lymph node metastasis originated from the urothelial cancer that has metastasized to his urethra from the bladder. This suggestion is based on the ability of urethral tumors to metastasize to inguinal lymph nodes. Only one similar case was found in the literature in the same age group.

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Fig. 1. 20x H&E showing high grade papillary urothelial carcinoma.

Fig. 2. 20x H&E showing lamina propria invasion.

Fig. 3. GATA-3 of the right inguinal lymph node showing positive nuclear staining consistent with metastatic urothelial carcinoma.