Ureteric stricture: an unusual presentation of metastatic prostate adenocarcinoma

S Jallad, R Turo, M Kimuli, J Smith, S Jain

Leeds Teaching Hospitals NHS Trust, UK

ABSTRACT

We describe an unusual case of a prostatic adenocarcinoma presenting with a ureteric stricture secondary to a discrete metastatic lesion. A 76-year-old man presented with a short history of right loin pain. Initial examination was unremarkable, digital rectal examination was normal and prostate specific antigen was within normal range. Computed tomography showed right hydronephrosis and a distal ureteric stricture. A distal ureteric transitional cell carcinoma was thought to be most likely. A nephroureterectomy was carried out and histology revealed a skipped lesion of a metastatic prostate adenocarcinoma. Metastatic lesions to the ureters due to prostate cancer are rare. It was believed to be secondary to a transitional cell carcinoma as there was no evidence initially to suggest prostatic disease as the cause. A prostatic adenocarcinoma should be considered in the differential diagnosis of any lesions in the ureter believed to have a malignant origin.

Ureters are often affected in prostate cancer, either by local extension causing obstruction or by external compression secondary to enlarged lymph nodes. Clinical presentation with ureteric involvement due to a discrete metastatic lesion is rare. We report an unusual case of prostate cancer presenting as a skipped lesion to the ureter.

Case history

A 67-year-old man presented with a short history of right loin pain. Abdominal examination was unremarkable and digital rectal examination (DRE) revealed a smooth, benign feeling prostate with some firmness noted at the base. His creatinine was elevated to 193μmol/l (normal range: 80–115μmol/l), while the prostate specific antigen (PSA) level was 3.9ng/l and the liver function tests were within normal range. Subsequent computed tomography showed a right distal ureteric stricture causing right hydronephrosis and hydroureter. In addition, there was peristriiction inflammatory changes and local lymphadenopathy.

The patient was discussed at a local multidisciplinary team meeting where it was thought that a distal ureteric transitional cell carcinoma (TCC) was the most likely diagnosis but that an inflammatory process was also a possibility. He was booked for an urgent right retrograde study and a right ureteroscopy.

Cystoscopy was normal. The right retrograde study showed a very tight long ureteric stricture, 4cm from the vesicoureteric junction, that was too tight to allow for ureteroscopy. A ureteric stent was therefore inserted and
Discussion

Prostatic adenocarcinoma presentation with a ureteric stricture secondary to a discrete metastatic lesion and a normal initial DRE and PSA is rare and has not been reported previously. To our knowledge, this is the first case in the literature of prostate cancer presenting with an isolated ureteric stricture.

We performed a MEDLINE search and found 11 cases in 8 reports of metastatic lesions to the ureter. In the French literature, Petit et al reported two cases and Yonneau et al reported one case. Cortadellas et al reported one case in the Spanish literature. Brotherus and Westerlund reported three cases. Zollinger et al, Benejam et al, and Hulse and O’Neill reported one case each. Haddad reported three cases, one of which was caused by prostate cancer. To our knowledge, all these reports were in patients who had established prostate cancer or who had previously had treatment for prostate cancer. We also found reports of direct extension of prostate cancer involving one of the two ureters.

Conclusions

Our case represents an unusual first presentation of prostate cancer with initial normal examination and DRE. Metastatic lesions to the ureters due to prostate cancer are rare. A first presentation with this is unusual. Due to the presence of lymphadenopathy, a cancerous cause was suspected. It was believed to be secondary to TCC as there was no evidence initially to suggest prostate disease as the cause. Prostatic adenocarcinoma should be considered in the differential diagnosis of any lesions in the ureter believed to have a malignant origin.

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