Case Report

Metastatic testicular cancer presenting with hematuria and flank pain

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Abstract

Testicular cancer (TC) represents 1% of male neoplasms and 5% of urological tumors. Most of seminoma patients and about 55% of patients with nonseminoma TC have stage I disease at diagnosis. TC usually presents with a palpable testicular mass incidentally found by the patient himself or its partner by palpation. It shows excellent cure rates based on their chemosensitivity, especially to cisplatin-based chemotherapy, but careful staging at diagnosis, adequate early treatment based on a multidisciplinary approach and strict follow-up are necessary. We present a case of a 25-year-old male patient who was diagnosed of metastatic TC with an atypical presentation: hematuria, hydronephrosis, and direct infiltration of the ureter by the retroperitoneal mass, mimicking a renal colic. After orchiectomy and placement of a double-J stent, the evolution was favorable, with a good response after the first cycle of chemotherapy with quick resolution of hematuria. After the treatment, a retroperitoneal lymph node dissection was performed. The patient remains disease-free after 3 years of follow-up.

Keywords: Atypical presentation, metastatic, testicular cancer

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INTRODUCTION

Testicular cancer (TC) usually presents with a palpable testicular mass incidentally found by the patient himself or his partner by palpation. The patient may also notice the mass after minor trauma, and up to 20% of the cases will refer some degree of pain.[1]

TC usually show excellent cure rates based on their chemosensitivity, especially to cisplatin-based chemotherapy, but careful staging at diagnosis, adequate early treatment based on a multidisciplinary approach and strict follow-up and salvage therapies are necessary.

We report a rare case of TC presenting with hematuria, hydronephrosis, and flank pain, due to direct infiltration of the ureter by the retroperitoneal mass, mimicking a renal colic. The patient had not previously presented other symptoms related to the tumor. To our knowledge, this is the first case ever reported with this presentation.

CASE REPORT

A previously healthy 25-year-old male patient without

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any relevant medical history, attended to the emergency department with macroscopic hematuria without clots and right flank pain that started the same morning. Neither fever nor other signs suggestive of infection were present. Urinalysis showed hematuria and neither leukocyturia nor bacteriuria.

Suspecting a renal colic, a kidney-ureter-bladder X-ray and urinary system ultrasound were performed as per institutional protocol, showing right hydronephrosis without signs of ureteral lithiasis in both cases.

Therefore, a computed tomography (CT) scan was carried out and showed a 5 cm retroperitoneal mass infiltrating the right ureter and a second 3 cm mass cephalad to the previous [Figure 1].

Suspicion of TC diagnosis was raised and directed genital physical examination showed a barely palpable mass in the lower pole of the right testis. A testicular ultrasound confirmed a 16 mm × 20 mm mass [Figure 2].

Preoperative tumor markers were: lactate dehydrogenase (LDH) 341 U/l (normal 135–225), beta-human chorionic gonadotropin (HCG) 1965 mU/ml (normal <2), alfa-FP 0.73 ng/ml (normal <7).

Within 36 h, a right radical orchiectomy and double-J stent placement were performed (due to hematuria worsening with clot formation).

The final pathologic analysis showed a 18 mm × 16 mm germ cell tumor, composed of 70% teratoma and 30% choriocarcinoma without any sign of lymphovascular, albuginea or rete testis invasion (pT1 R0). The stage was IIB: T1 N2 S1.

7 days postoperative tumor markers were: LDH 482 U/l (135–225), Beta-HCG 2168 mU/ml (<2), and Alfa-FP 1.30 ng/ml (<7).

In a multidisciplinary team meeting, together with oncologists and radiologists, it was decided to start chemotherapy as soon as possible with BEP (bleomycin, etoposide, and cisplatinum). Sperm cryopreservation was performed and chemotherapy was started 1 week after orchiectomy.

During the following days, after starting chemotherapy hematuria stopped and the first cycle was completed uneventfully.

The treatment was completed and a residual mass of 2 cm in control CT scan was evidenced. A retroperitoneal lymph node dissection was carried out, and pathologic analysis showed necrotic-fibrotic tissue and a small 1 mm fragment of choriocarcinoma. After that, during the next 3 years of follow-up, the patient remained disease-free.

DISCUSSION

TC represents 1% of male neoplasms and 5% of urological tumors. Most TCs (around 63%) are diagnosed at stage I.[1] Histology of TC is reported to be 13% pure seminoma, 55% nonseminoma, and 28% a mix of both.[2]

Nowadays, the 5-year relative survival rates for TC reach up to 99%. Depending on stage and histology, with stage I patients approaching 100% and those with metastatic presentation reaching 74% 5-year relative survival rate.[2]

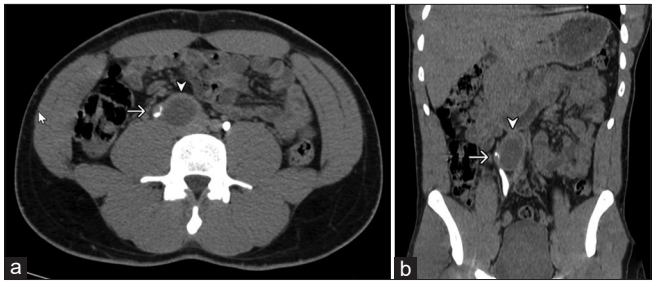

Figure 1: Retroperitoneal mass (arrowhead) infiltrating the right ureter (arrow) on computed tomography-scan. (a) Axial plane. (b) Coronal plane

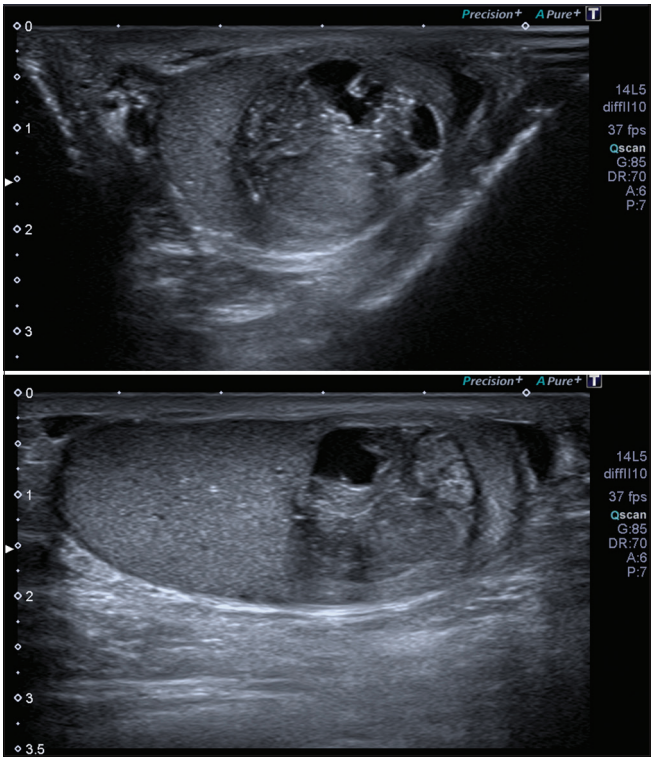

Figure 2.: Ultrasound showing primary testicular tumour

TC usually presents as an incidentally found palpable mass, but may have a heterogeneous clinical presentations.[1]

External compression of the ureter causing ureteral obstruction and hydronephrosis is one of the complications of TC with retroperitoneal lymph node metastasis (and other retroperitoneal malignancy) and has been widely described in the literature.[3] It is usually managed by ureteral stenting or nephrostomy placement, and treatment of the primary cause if possible.

In the past, few atypical presentations for TC have been described including five cases of metastatic TC to the ureter, presenting with hydronephrosis without external compression of the ureter. The first of these descriptions by Johnson *et al*. in 1981[4] and the most recent by Kheyfets *et al*. in 2015.[5] Four of these five cases had pure seminoma histology and one of them was a differentiated teratoma.[6-8] Other atypical presentation is a burned-out testis tumor (that regresses spontaneously with no treatment) that can be found like a primary extragonadal retroperitoneal tumors.[9,10]

To our knowledge, this is the first case ever reported about TC presenting with hematuria, hydronephrosis and direct infiltration of the ureter by the retroperitoneal mass mimicking a renal colic.

Other atypical presentation is a burned-out testis tumor (that regresses spontaneously with no treatment) that can be found like a primary extragonadal retroperitoneal tumors.[9,10]

In young patients with no past medical or family history of renal colics and no clear cause for hydronephrosis, a CT scan is advisable and directed genital examination may help in management. If the hematuria or hydronephrosis are important, a ureteral stenting is recommended.[3]

Our patient had a good response after the first cycle of chemotherapy with quick resolution of hematuria. After the chemotherapy treatment, a retroperitoneal lymph node dissection was performed. The patient remains disease-free after 3 years of follow-up.

Conclusion

The clinical presentation of testicular cancer can be varied. We present the case of a young patient with a testicular tumour presenting with haematuria and flank pain. It is important to know the less frequent presentations of this pathology in order to reach an early diagnosis.

Informed consent

written informed consent was obtained from the patient for publication of this Case report and any accompanying images.

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Conflicts of interest

There are no conflicts of interest.

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