Spontaneous renal fornical rupture due to a bladder tumor

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ABSTRACT

Extravasation of urine following rupture of the renal fornix is a rare complication mostly caused by obstruction secondary to distal ureteric stones. We report the case of a rupture of FORNIX secondary to a bladder tumor.

Introduction

Fornix rupture is a rare phenomenon, which can occur at any age, most often secondary to calculus. Neoplasms are rarely the cause of urinoma formation. We report the case of a rupture of FORNIX secondary to a bladder tumor.

Observation

An 82-year-old man, chronic smoking, and who has had intermittent hematuria for 1 year without any other associated signs. The evolution was marked by the appearance of left low back pain evolving in a context of apyrexia and preservation of the general state motivating the patient to consult the urological emergency. On clinical examination, we find a conscious patient, HD stable and respiratory, apyretic, normocolored conjunctiva with sensitivity in the left lumbar fossa. On digital rectal examination, we note a prostate estimated at 30 gr, bladder base slightly infiltrated on the left side but mobile, the rest of the examination is without particularity. The biological assessment, the hemoglobin level was 11 g/dl, a slightly impaired renal function (Creatinemia = 15 mg/l, ure = 0.6 g/l), CRP at 50 mg/l, with a sterile CBEU. Abdominal ultrasonography showed a moderate left uretero-hydronephrosis with anechogenic peri-renal effusion (Fig. 1), with a heterogeneous process of the left postero lateral wall of the bladder.

We completed with a URO-CT which was in favor of a tumor of the left postero lateral wall of the bladder (Fig. 2) responsible for a ureterohydronephrosis with urinoma on probable rupture of fornix (Fig. 3).

Our case management was emergency hospitalization with a trans urethral resection of the bladder and attempt of an ureteral stent. The cystoscopy had objective a tumor process of the left side wall, left meatus not seen. Trans urethral resection of the bladder tumor was made, but the left meatus was not individualized, then the patient underwent a percutaneous nephrostomy in the postoperative period. Histological study was in favor of urothelial carcinoma, high grade, noninfiltrated muscle. Postoperative follow-up was normal, with normalization of renal function.

Discussion

Rupture of fornix is a rare pathology, of radiological discovery secondary to a perirenal urinary extravasation associated with ureteral obstruction. Ureteral stones are the most common cause of rupture of fornix, and rarely has other causes such as: malignant ureteral compression, pregnancy, posterior urethra valves, vascular extrinsic compression, iatrogenic or idiopathic.1 In our case, uretero hydronephrosis which caused the rupture of fornix was secondary to a bladder tumor.

The rupture of fornix is secondary to an over pressure exerted on the renal parenchyma. In chronic pathologies, it is the reflection of urine in the pyelo caliceal pathways which will be responsible for the progressive appearance of hydronephrosis and then inflammation of the renal parenchyma.2 In our patient, the mechanical compression of the lower ureter by the bladder process, and the inflammation which will be responsible for the rupture of the cavities.

The clinical signs are not specific, and renal colic is the most frequent, the diagnosis is most often delayed.3 In previous studies, fever and leukocytosis are most often absent, as in our case.4

The prognosis depends on the underlying pathologies, the location of

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the renal rupture, the degree of kidney damage and the presence of infection. The evolution of extravasation of urine is most often benign, but it can be complicated by perinephric abscesses, urethral stricture or retro peritoneal fibrosis.

The treatment is based on antibiotic therapy to prevent infection of the urinoma. Placement of an indwelling ureteral stent or diversion via a percutaneous catheter can relieve obstruction from tumor compression, and the treatment of causal pathology. The advantage of a Placement of an indwelling ureteral stent is described in the literature, which allows the reduction of extravasation of perirenal urine.

Conclusion

Rupture of fornix is a rare urological complication, most often secondary to a lithiatic obstacle, more rarely to a tumor cause. URO-CT has an important role in the positive diagnosis. The treatment is based on the derivation of urine first and then to treat the causative pathology.

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