Case Reports

ANTOPOL-GOLDMAN LESION: A RARE CLINICAL ENTITY IN THE DIFFERENTIAL DIAGNOSIS OF MACROSCOPIC HEMATURIA

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Summary. OBJECTIVE: To describe the case of a patient with gross hematuria. The pathological study revealed a subepithelial hematoma of the renal pelvis (Antopol-Goldman lesion).

METHODS/RESULTS: An 86 year-old woman presented with gross hematuria through the right ureteral orifice. A filling defect is visualized in the right renal pelvis on CT and
right nephroureterectomy was carried out after the diagnosis of suspicious upper urinary tract tumor. The pathological study revealed the presence of a subepithelial hematoma without evidence of malignancy.

CONCLUSION: Antopol-Goldman lesion is a benign condition that one must have in mind in the work up of patients with hematuria and filling defects in the urinary tract who present a predisposing factor for pyelic hematoma.

**Keywords:** Antopol-Goldman. Subepithelial hematoma. Gross hematuria.

**CASE REPORT**

An 86 years old woman came for evaluation of painless hematuria of 24 hours duration with no history of trauma. Among the personal history, it was noted the presence of cardiac arrhythmia and hypertension treated with acenocumarol and higrotona. The physical examination showed no significant findings and a ultrasound was performed. Ultrasound showed normal kidneys without images of stones, hydronephrosis or neoplasms, bladder without alterations on the wall or inside, so flexible cystoscopy was performed. Cystoscopy: No bladder cancer and hematic ejaculation by right ureteral orifice. A computed tomography revealed kidney thickening and an increased uptake of the wall of the right renal pelvis, especially in its peripheral region, with moderate dilatation of the calyces due to probable infundibular involvement (Figures 1 and 2). There was not a clear invasion of the renal parenchyma and the renal vein was preserved. Unaltered left kidney, adrenals: unchanged. Retroperitoneum: Thickening of right pararenal fascia, especially in the lower cone, probably in connection with calyceal dilation and possible rupture of a fornix. No lymphadenopathy. Moderate aortic atherosclerosis.

With the clinical diagnosis of urothelial tumor of the right renal pelvis we decided, together with the patient and family (86 years, cardiovascular comorbidity), to perform a right nephroureterectomy.

One month after diagnosis a laparoscopic right nephroureterectomy was performed without incident and without postoperative complications.

Pathologic findings: The nephroureterectomy specimen showed a weight of 162 gr. and measured 10.5 x 5.5 x 4.5 cm. with a segment of ureter measuring 10.5 cm

**INTRODUCTION**

The Antopol-Goldman lesion is a diagnostic challenge. It shares clinical (hematuria) and radiological (filling defect in the renal pelvis) signs with urothelial tumors of the upper urinary tract, but its benign nature does not call for aggressive treatment. In most cases a pathological diagnosis is made after the kidney removal (totally or partially) for suspected neoplasm.

We describe a patient with a subepithelial renal pelvis as described by Antopol and Goldman in 1948 which simulates a transitional cell carcinoma (1).
in length. At the opening of the kidney in the pelvis and calyces were seen as areas of petechial hemorrhagic appearance, slightly raised. No mass was found, only a few clots, attached to the mucosa. The microscopic study showed a subepithelial hematoma of the renal pelvis with no neoplastic lesion or dysplastic urothelium and focal presence of amyloid material on the wall peripelvic vessels wall.

The patient is asymptomatic from performing laparoscopic nephroureterectomy.

**DISCUSSION**

Subepithelial hematoma of the renal pelvis is a rare lesion (the case presented is the thirty-second published in the literature) that clinically and radiologically resembles the renal pelvis urothelial tumors. The most frequent symptoms are gross hematuria and back pain secondary to obstructive uropathy due to the mass effect of hematoma or the presence of clots in the urinary tract. In the case presented here, the patient only showed gross hematuria without clots probably caused by chronic treatment with acenocoumarol. Other urinary symptoms such as suprapubic pain and micturition (2) or even systemic symptoms such as fever and weight loss could also appear.

It is not known clearly the etiology of these lesions. It has been postulated multiple predisposing factors and triggers presents in one or more patients have been reported. Antopol and Goldman in their series of 7 patients indicated the possibility that the presence of congenital defects in the vascularization of the renal pelvis as predisposing factor along with the presence of trauma (although of minimum intensity) as a precipitating factor could be involved in the subepithelial bleeding. In most cases described later there was no history of trauma and the study of renal vessels was normal. Because of this other authors described the presence of urological disorders such extrarenal pelvis, ureter double or anomalous insertion of the ureter like predisposing factors. Chronic treatment with analgesics (4,5), anticoagulants (6,7), (as in our patient), diabetes or high blood pressure have been described like contributing factors (8).

Statistically Antopol-Goldman lesion occurs at any age group (the youngest patient was 25 years-old while the older patient as described in this case report was 86 years old), it's more frequently in women (70%) (9) and on the right side (70%) (10).

As in the case presented by Eccher in 2009 this patient had amyloid deposits in the peripelvic vessels. Amyloid deposit was located only on the wall of some vessels without amyloid observed in renal glomeruli (being their normal morphology) so it can not be considered a primary renal amyloidosis. Amyloid deposition may increase vascular fragility and impaired vasoconstriction contributing to the abnormal bleeding (8) and the anticoagulant treatment favoring the subepithelial hematoma formation. The presence of petechiae in the urothelial mucosa can be regarded as a vascular consequence of this weakness or as a stigma due to the presence of subepithelial hematoma (11).
The diagnostic protocols of gross hematuria, after ruling out the presence of bladder lesions, is the realization of intravenous urography (IVU) or computed tomography (CT). In both cases subepithelial hematomas causes filling defect in the urinary tract similar to those caused by urothelial tumors. Renal ultrasonography may be normal or reveal a heterogeneous mass with hydronephrosis ultrasound in the case of obstructive uropathy (3).

Neither the implementation of renal arteriography (performed systematically to the popularization of the CT) or retrograde pyelography (performed in the case of renal functional delay) provide data that can differentiate this benign lesion from a neoplasm. The making of a ureterorenoscopy for the differential diagnosis, may be a possibility in cases of diagnostic doubt and could save some unnecessary nephrectomies, but these subepithelial hemorrhages may be nodular or papillary and visualization of the mucosa of the renal pelvis can be difficult because of bleeding and the presence of clots. In our hospital, we don’t include endoscopic examination of upper urinary tract in all patients with clinical and radiological diagnosis of urinary tract tumor, using this diagnostic modality in the case of kidney patients or those who will make treatment conservative (bilateral tumor or renal failure, single tumors, less than 2 centimeters and no infiltrative appearance.) In this case, the concentric filling defect of the renal pelvis and the presence of moderate calyceal dilatation for possible involvement of infundibula made us discard the endoscopic treatment as diagnostic ureteroscopy was not performed.

In most cases the treatment in these patients as in our case has been to perform a nephrectomy for suspected urothelial tumor. Only in some cases in which were suspected of benign lesion conservative treatment was performed. In a case with suspected stenosis of the ureteropelvic junction a pyeloplasty was performed (12). In two cases which were suspected a ureteropelvic hematoma a treatment with analgesics and rest and radiological control 3-6 weeks for assessment of the hematoma.

The prognosis of these patients is good, in the case of conservative treatment, new episodes of bleeding hadn’t occurred.

**CONCLUSION**

Subepithelial hematoma of the renal pelvis (Antopol-Goldman lesion) is a benign disease of unknown etiology that simulates a neoplasm of the urinary tract due to its clinico-radiological features. It is important to suspect its presence in patients with a history of renal trauma, prolonged treatment with analgesics or anti-coagulants. In these cases of suspecting, the treatment should be conservative with rest and radiological control 3-6 weeks for assessment of the hematoma.

**REFERENCES AND RECOMMENDED READINGS**

(*of special interest, **of outstanding interest)


Case Reports

ULTRASOUND DIAGNOSIS OF THREE CASES OF MONDOR’S DISEASE


Summary.- OBJECTIVE: To describe clinical features and ultrasound findings of three cases of a little-known and relatively infrequent entity in daily clinical activity, which is often unnoticed and under-reported: penile Mondor’s disease or superficial penile veins thrombophlebitis.
METHODS: We are reporting the cases of three patients aged 33, 25 and 39 years who were referred to our department, the first case with suspicion of inguinal hernia, the second one to rule out testicular pathology because of pubic and perineal discomfort, and the third one for painful...