Subepithelial pelvic hematoma of the kidney (Antopol–Goldman Lesion)

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ABSTRACT

Renal pelvic hematoma (Antopol Goldman lesion) is a rare but significant condition that may clinically mimic a renal or a pelvic neoplasm. Differential diagnosis and optimal treatment are still not known certainly. A 80- year-old male patient admitted to the emergency department with gross hematuria/clot retention and right flank pain. Magnetic resonance imaging (MRI) imaging revealed a filling defect in the right renal pelvis. Diagnostic flexible ureterorenoscopy was performed and a renal pelvic tumor was excluded. A 6 Fr double J (DJ) ureteral catheter was placed for 4 weeks while the patient was under an antifibrinolytic therapy. Filling defect was not detected at 3rd month control MRI. During 6 months of the follow-up period, gross hematuria or any abnormal radiological finding was not encountered.

Keywords: Antopol-Goldman lesion; kidney; pseudotumor; subepithelial pelvic hematoma.

Introduction

Subepithelial renal pelvic hematoma was firstly described by Antopol, and Goldman.[¹] All of this first series of seven patients had undergone nephrectomy with the initial diagnosis of collecting system or kidney tumour. We have encountered a total of only 41 cases reported in the literature.[¹-¹⁵] Typically nearly all of the patients have filling defects detected on imaging methods accompanied with clinical manifestations of painful or painless macroscopic hematuria. Lesion can be frequently localized on renal pelvis, and rarely on the upper ureter, while we haven’t encountered a reported case Antopol-Goldman lesion situated in the bladder.

In this article we present a case with Antopol Goldman lesion in our 80-year-old male patient with initial diagnosis of malignancy on whom we performed conservative follow-up, and medical treatment without resorting to nephrectomy and differentiated this condition from malignancies using flexible ureterorenoscopy.

Case presentation

Hematoglobe was detected in a 80-year-old male patient who consulted to the emergency service of our clinic with complaints of right flank pain, and bloody urine with clots, and bladder was irrigated using an intraurethrally inserted Foley catheter. On ultrasonograms, a grade 2 hydronephrosis of the right kidney was detected. Patient’s medical history revealed 3-4 episodes of hematuria with clots within the previous 2 years without any past evidence of trauma, anticoagulant drug use or coagulopathy. Intravenous contrast-enhanced MRI demonstrated a 4-cm- wide filling defect associated with the right renal collecting system (Figures 1, 2). His hemoglobin levels gradually declined, and after erythrocyte replacement, he underwent diagnostic cystoscopy, and flexible ureterorenoscopy. Any evidence of tumoral involvement of bladder, ureter, and right renal pelvis was not encountered.

Bloody urine was drained from the right renal collecting system, and a 6 Fr double J (DJ) ureteral stent was implanted in the patient who had priorly scheduled for nephroureterectomy before application of ureteroscopy, and he was included in the conservative monitorization protocol. Persistence of hematuria necessitated initiation of oral tranexamic acid, and antifibrinolytic therapy to achieve hemostasis. Four weeks later, after patient’s clinical stabilization, his DJ stent was withdrawn. Control MR images obtained 3, and 6 months later revealed disappearance of the filling defect. Written informed consent was obtained for this study from the participant.
Renal subepithelial pelvic hematoma is a rarely detected benign lesion with a challenging radiological diagnosis. Its etiology is not known precisely. In the literature, various conditions have been associated with its etiology in miscellaneous case series which include trauma, congenital malformations (bifid pelvis, fetal lobulation, aberrant vessels, and ureteral insertion abnormalities), hypertension, excessive analgesic use, and anticoagulant therapy. As far as we can detect, one case in the neonatal age group, and 12 cases under 40 years of age were encountered in the literature, but it is more frequently observed in individuals older than 40 years without any predilection for male or female gender. Majority of the patients with hematuria, and filling defect in the renal pelvis had eventually undergone nephroureterectomy, and diagnosis could only be made after histopathological analyses. Firstly in the year 2008, Cardin et al. treated a case with subepithelial hematoma using conservative monitoring. Inclusion of Antopol-Goldman lesion in the differential diagnosis of malignancies has led to an increase in the number of patients followed up with conservative approaches without resorting to nephroureterectomy. In a case where hematuria could not be managed conservatively, application of selective arterial embolization was reported. Although, cases diagnosed using only cross-sectional imaging methods, and followed up conservatively have been reported, we couldn’t encounter a case presentation in the literature, where use of flexible ureterorenoscopic approach has been reported for diagnostic purposes. Since initial radiological diagnosis was reported as Antopol-Goldman lesion, we performed flexible ureterorenoscopy for the differential diagnosis of malignancy, and the patient was treated using a conservative approach. In the differential diagnosis of filling defects detected in the renal pelvis, radiolucent uric acid or matrix stones, blood clots, ectopic papilla, lymphatic cyst, and pyelitis cystica should be kept in mind. In the diagnosis of filling defects of upper urinary system, apart from cross-sectional imaging techniques, prevalently used diagnostic procedures include urine cytology, retrograde ureteropyelography, and diagnostic ureterorenoscopy. Thanks to widespread use of flexible ureteroscopy, we think that number of unnecessary nephrectomies performed for suspect upper urinary system malignancies which eventually revealed to be subepithelial pelvic hematoma, and similar benign lesions will decrease.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

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References