CASE REPORT

SUB-EPITHELIAL HEMATOMA OF RENAL PELVIS MIMICKING A NEOPLASM; A CASE REPORT

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ABSTRACT

Sub epithelial hematoma of the renal pelvis is rare entity without known aetiology. Although many associations of the condition have been described. Patient usually present with flank pain and hematuria. Although the condition is benign and resolves with time but it is crucial to be diagnosed and differentiated from renal neoplasm, to prevent unnecessary nephrectomy. We present a case of a 55-year-old female presented with flank pain and hematuria. CECT showed sub-epithelial hematoma as hyperdensity in right renal pelvis and proximal ureter. Patient was advised follow up USG scan to ensure resolution of the lesion and rule-out any underlying neoplasm.
Keywords: Sub-epithelial hematoma, neoplasm, renal pelvis.

Introduction

Sub-epithelial hematomas in the renal pelvis are extremely rare with only upto 39 cases reported in literature.[2] Most of these diagnosed after nephrectomy. These lesions simulate malignancy and are usually misdiagnosed as renal cell carcinoma or transitional cell carcinoma.[5] No definite cause for this condition has been reported, but many associations have been described, including trauma, known bleeding disorders, recent or past history of anticoagulant intake, NSAID overuse, other drug abuses, amyloidosis,[1] vasculitis and congenitalrenal malformations. Patient usually present with hematuria, which could be intermittent, micro or macroscopic and sometimes with only flank pain. As the lesion gives false impression of a renal tumor on initial ultrasound scan, CT can also raise suspicion of renal pelvic mass. but lack of enhancement, location of the lesion, proper history and clinical correlation and disappearance of the lesion on follow up scan can confirm the sup-epithelial hematoma of renal pelvis. Differentiating this pseudo-lesion from renal neoplasm is crucial to prevent unnecessary nephrectomies.

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Case Discussion

A 55-year-old female patient has been referred to radiology department of Bolan medical complex hospital, by urology department with the complaint of sudden onset right flank pain and hematuria. No other associated symptoms were stated. No associated comorbidities. No documented history of previous or recent trauma. Laboratory investigations showed hemoglobin 9.2 gram/dl, leucocytes 6.4x109, neutrophils 62%, esinophils 1%, lymphocytes23%. Blood pressure was 125/85 mmHg. She was advised ultrasound KUB by the referring team. Ultrasound showed a heterogeneously hyperechoic lesion in right renal pelvis, mild right sided hydronephrosis was also reported, however no calculus noted. Suspicion of renal mass was raised on the basis of ultrasound finding and patient was referred for contrast enhanced CT abdomen for further characterization. CECT showed a non-enhancing hyper dense lesion (50 to 60 HU)in right renal pelvis (Fig.1a,1b) with mild extension into the proximal ureter (Fig.2a). Minimal right sided hydronephrosis was also noted. Normal looking bilateral renal vessels were noted with no

filling defect. Left kidney was normal. Urinary bladder showed no mass or abnormal wall thickening. On the basis of these findings renal hematoma was diagnosed and patient was advised close follow up to ensure resolution of this lesion.

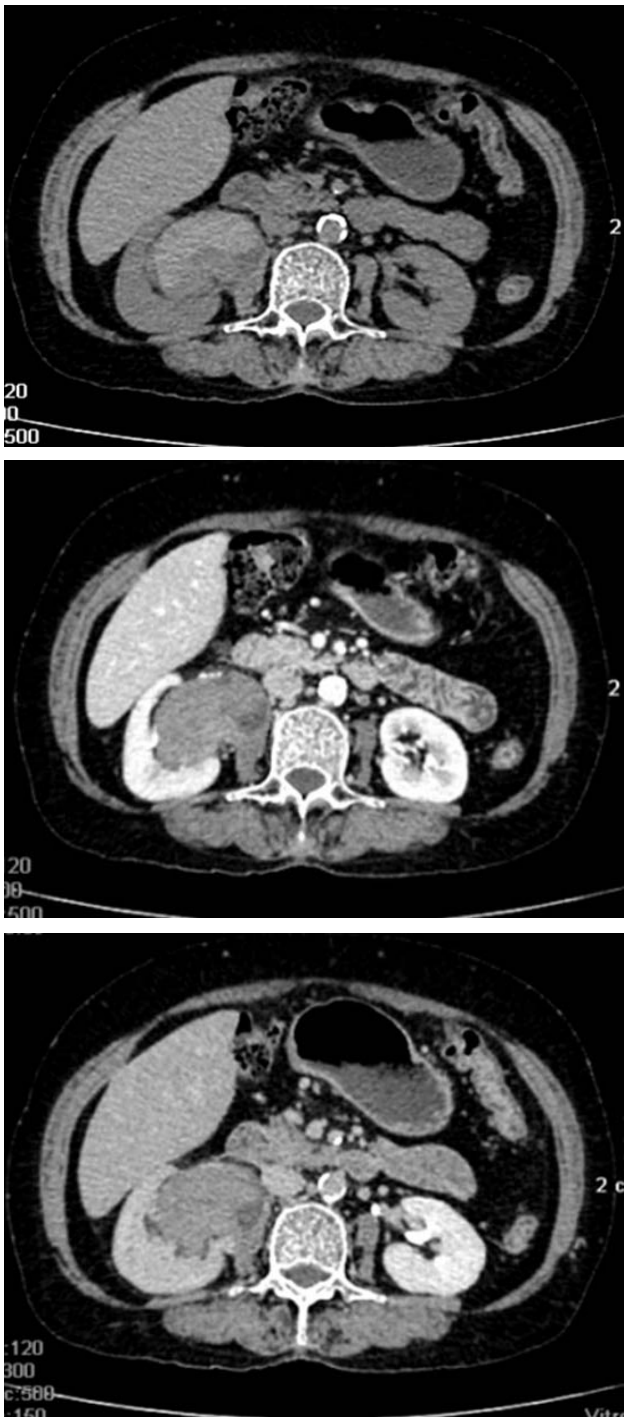

Figure 1a&b: Unenhanced and enhanced axial CT abdomen showing hyperdense right renal pelvic lesion **C:** shows relatively hypoenhancing right kidney

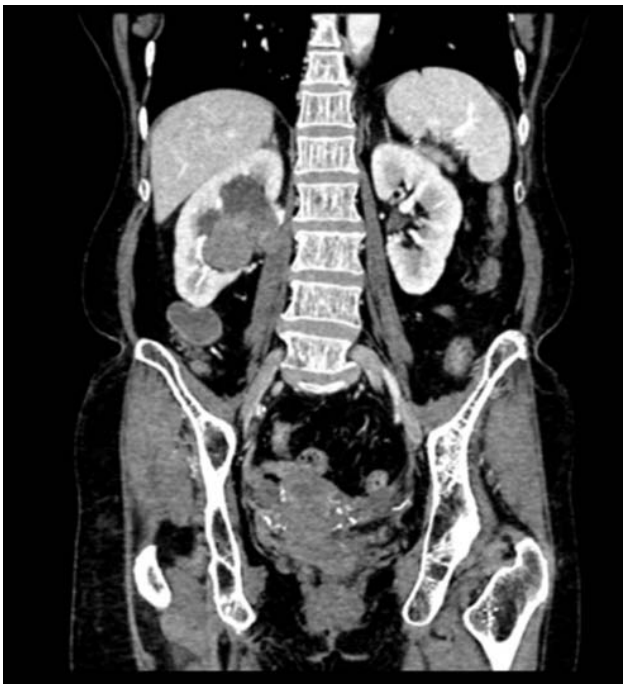

Figure 2a: Coronal reconstructed post contrast CT shows hyperdensity extending to proximal ureter with fullness in renal pelvis and ureter.

Discussion

Sub-epithelial hematoma also called as Antopol-Goldman lesion of the renal pelvis is extremely rare entity, upto 39 cases has been reported in literature till 2009.[2] These lesions were first described by Antopol and Goldman in 1948, where they reported 7 cases, all of which were diagnosed after nephrectomy. Three more cases were added by Laby and Orkin in 1972. Of the 7 cases reported by Antopol and Goldman all were women and in all cases right kidney was involved, five were associated with congenital renal anomalies and two presented with history of trauma[4] although cases with involvement of the left kidney has also been reported.[1,4,5] In our case patient was also female with right sided involvement.

Almost in all cases, patients presented with flank pain and hematuria (gross/microscopic) with no atypia in urine analysis. The etiology of these lesions remain unknown, but many suggested co-factors have been described in literature including trauma, congenital malformations (bifid pelvis, abnormal ureteral insertion) hypertension, diabetes, renal colic, drug abuse,

amyloidosis.[1] Factor V and VIII deficiency[2] have also been reported where there was associated psoas hematoma and hemarthrosis as well. Many patients gave previous history of anticoagulant intake like digoxin, warfarin, coumarin.[3,4]

Histology of these lesions showed sub-epithelial / peripelvic hemorrhage with areas of organized hematomas and no neoplastic component.[1] Radiological and clinical similarities of these lesions with renal neoplastic lesions make the diagnosis difficult. But awareness of these benign lesions may prevent unnecessary surgeries. in suspected cases close follow-up is suggested to ensure resolution. Many cases showed complete recovery on 6 months follow up.[3,5]

Conclusion

Although uncommon, sub-epithelial haemorrhage should be in differential diagnosis in cases of hyperdense non enhancing lesion on CT scan. Imaging can not only diagnose but can save patient from unnecessary surgical intervention.

Conflict of interest: None

Ethical committee: approved the case.

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