



Ectopic Presacral Kidney with Calculi: A Case Report

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Abstract

An abnormally located kidney due to faulty migration in embryonic life is called an ectopic kidney. It may be an asymptomatic condition or it may present with complications. This is a case report of an adult female patient who presented to our side with complaints of pain in a lower abdominal lump which was present since birth. On evaluation, she was diagnosed as a case of left ectopic pelvic kidney with nephrolithiasis.

Keywords: Ectopic Kidney, Pelvic Kidney, Nephrolithiasis.

Introduction

An atypically placed kidney due to defective migration (failure to ascend) during embryologic development is called an ectopic kidney.⁽¹⁾ It may be abdominal, lumbar or pelvic in position; it may be either on same side or may be on opposite side when it is called crossed renal ectopia.

A pelvic or presacral ectopic kidney lies in the true pelvis, opposite the sacrum and below the aortic bifurcation with a short ureter and aberrant blood supply. There is no single most preferred location for an ectopic kidney.

According to the literature, the reported frequency of ectopic kidney is 1:500 to 1:110; ectopic thoracic kidney 1:13000; one normal and one pelvic kidney 1:3000 and crossed renal ectopia 1:7000. (Bergman et al,²) Bilateralism is seen in around 10% of renal ectopia.

A simple ectopic kidney is usually asymptomatic. Therefore, the diagnosis is often an incidental finding, either on radiographic evaluation or at

surgery. A pelvic kidney may present as an abdominal mass. If malrotated, there is a risk of calculus formation with resultant hydronephrosis which then presents clinically as pain and haematuria.⁽³⁾ Extremely rare cases of renal cell carcinoma have also been reported.^(4,5)

Renal ectopia is clinically more early recognised in females because they undergo uro-radiologic evaluation more frequently than males.

Case Report

A 55 years old female was admitted to our side with chief complaints of pain in lower abdomen from two years which has increased in intensity over the last 3 months. It was associated with burning micturition from 3 months. On examination, we found a palpable, tender, well-defined left lower abdominal lump. Patient was given symptomatic drugs and digital X-ray KUB with a whole abdomen sonogram advised which revealed an empty left renal fossa, with a left

presacral kidney: 80*33mm size, axis rotated and placed transversely with dilated pelvicalyceal system and, with multiple stones in renal pelvis, the acoustic surface of largest stone measuring 24mm. The right kidney was normal in size, shape and position and had no calculi. A CT Scan further confirmed the diagnosis of left ectopic presacral kidney with stones.

Functional status of the left ectopic kidney was assessed and found normal and then, open pyelolithotomy planned and successfully done along with a DJ stent placement on 25/04/18. The post-operative period was uneventful and the patient was discharged on the sixth day post-surgery. She was kept on regular follow-up. The DJ stent was removed cystoscopically after 3 weeks and the patient presented with no further complaints till date.



Digital X-Ray KUB showing left ectopic renal calculi

Discussion

Renal ectopia is a less common diagnosis due to the usual asymptomatic nature. Most commonly it is an incidental finding at investigations being done for other reasons or the patient may present with an abdominal lump with haematuria or simply as a case of urinary tract infection. There is

increased risk of hydronephrosis due to the impaired urinary drainage because of malrotation.⁽⁶⁾ Few cases of renal cell carcinoma have also been reported. It may also be found along with congenital anomalies of the genitourinary, skeletal or cardiovascular systems.⁽⁷⁾ Due to the abnormal position, ectopic kidneys are more susceptible to trauma.

Management of a renal ectopic depends on the type of presentation and may range from regular follow-up in asymptomatic cases with normal urinary function and no obstruction^(8,9) to even nephrectomy in extensively damaged kidneys. As in our case, calculi removal must be prompt else it may lead to further complications and cause irreversible renal damage. Also the risk of carcinoma formation as reported in literature then and now, can't be ignored.

Conclusion

A pelvic ectopic kidney is generally asymptomatic but the association with malrotation increases the risk of complications like calculus formation (as seen in our case), haematuria, hydronephrosis and even invasive renal cell carcinoma. If asymptomatic, the patient must be kept on follow-up with regular ultrasounds to detect these complications at the earliest. If detected with complications, the patient should receive prompt management to prevent significant morbidity and mortality.

Declarations

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Conflicts of interest: None.

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