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Unascended Kidney: A Case Report

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ABSTRACT

Abnormalities of kidney and urinary tract are common. The incidence is more in males than in females. Ectopic kidney is a relatively rare entity, pelvic kidney being the common ectopic position of the kidney. We present a case of unilateral ectopic kidney on right side in a 45 year apparently normal male patient presented with pain in the right iliac fossa. An ectopic kidney often associated with an increased incidence of stone formation as a result of stasis.

Keywords: Ectopic kidney, unascended kidney, pelvic kidney.

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INTRODUCTION

Variation in the urogenital system is common. Anomalies may be in the number, position, shape, and size or in the rotation of kidneys [1,2]. Congenital anomalies of urinary tract are often the underlying causes of pathogenesis. According to Guterrez, 40% of pathologic conditions of the urinary tract are due to these variations [1]. An ectopic kidney is a relatively common condition, its incidence being around 10:10,000. The pelvic kidney represents most common form of ectopic kidney. It may be associated with other congenital anomalies [3].

Ectopic kidneys are due to failure of kidneys to ascend and rotate during organogenesis. The malpositioned kidney if it is situated in the pelvis, it is quite prone to disease and the resulting symptoms and signs are apt to be misleading. Pain due to pathologic process in a pelvic kidney is likely to direct attention to other organs [4].

Frequently ectopic kidney are poorly or abnormally developed rendering them more likely to pathological states than normal organs. We present a case of unascended right kidney situated in the right iliac fossa in a 45 year old male patient presented with pain in the right iliac fossa.

Case Report

A 45 year old male patient presented to the physician with the complaints of pain in right iliac fossa, fever and burning micturation since 2 days. On examination patient was febrile, blood pressure was normal. On per abdominal examination tenderness was present in the right iliac fossa. Patient was known diabetic since 6 months but not on regular treatment. In the investigations complete haemogram showed neutrophilic leucocytosis. Urine routine showed mild proteinuria with pus cells and bacteria. Patient was treated accordingly with the differential diagnosis of acute appendicitis, urinary tract infection or ureteric calculi. X- Ray KUB, ultrasonograph of the abdomen and pelvis revealed an ectopic kidney situated in the right iliac fossa, with mild hydronephrosis and obstructing ureteric calculi at pelviureteric junction. The patient was treated for urinary tract infection with antibiotics and analgesics and referred to the higher center for further treatment.

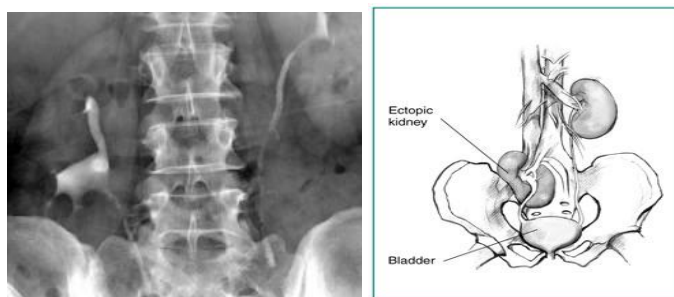


Fig 1: X-Ray KUB showing ectopic kidney.

DISCUSSION

Developmental abnormalities of the urinary tract are manifested in many forms. Variations of urinary tract can be classified as following types.

- Duplication of structures derived from the ureteric buds
- Failure of ascent or rotation of one or both kidneys; III) abnormalities of the renal blood supply [5].

Ectopic kidneys has reported frequency of 1:500 to 1:110; ectopic thoracic kidney 1:13000; solitary pelvic kidney 1:22000; one normal and one pelvic kidney 1:3000; and crossed renal ectopia 1:7000 [1].

Ectopic kidneys are due to developmental anomalies. Kidneys normally start to develop in the pelvis and migrate to their normal anatomical position in the abdominal region [6]. The ascent of kidney precedes the descent of gonads [2]. Caudal growth in the embryo appears to assist in the migration of kidneys out of pelvis [2].

The chief characters of the ectopic kidney are,

- Abnormally short ureter,
- Firm fixation of kidney,
- Blood vessels derived from the regional vascular trunks [4].

One or both kidneys may be in an abnormal position. Most ectopic kidneys are located in the pelvis. The ectopic kidneys receive their blood supply from vessels nearer to them [7]. Factors which interfere in development, such as teretogens, genetic factors, may result in abnormal migration of kidneys resulting in renal ectopia [2].

Unilateral ectopic kidney is more common than bilateral. The frequency is quoted to be higher in males than in females [1]. In our case the renal ectopia is unilateral and in male patient, in accordance with other authors findings. It is also found that congenital pelvic kidney is more common on left side than right. In our case the ectopic kidney is present on right side. The ectopic kidney may be structurally and functionally normal like in this case [4].

Kidneys in ectopic position are dysplastic and often non functional. They may go undetected in life. Symptoms of ectopic kidney may vary from none to pain, hydronephrosis, pyelonephrosis, and calculi as in our case [1]. Anomalies of kidneys are mostly asymptomatic and are often found only during physical or radiological investigations in the hospitals urologic or other medical complaints [2]. An exact diagnosis can be made only by ultrasonography [4]. The treatment is based on the functional capacity of the kidney. If the ectopic kidney has little or no function and the pathology cannot be treated with medical methods then nephrectomy is indicated provided there is a healthy and normally functioning kidney on the other side [4].



CONCLUSION

To conclude the awareness of the existence of variations in the position and drainage of malascended kidney with its clinical presentation is of great importance to surgeon who is operating on this area.

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