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Bilateral Pelvic Kidneys

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Abstract: 27years old male patient came to the hospital referred from ultrasound department. The ultrasound reported that there are empty renal fossae. Either ectopic pelvic kidney and absent other one. The patient complaining of hematuria, fatigue, and lower back pain.
Keywords: CTU, CT, US.

INTRODUCTION

The kidneys are two bean-shaped organs found on the left and right sides of the body in vertebrates. They are located at the back of the abdominal cavity in the retroperitoneal space. In adults they are about 11 centimetres (4.3 in) in length. They receive blood from the paired renal arteries; blood exits into the paired renal veins. Each kidney is attached to a ureter, a tube that carries excreted urine to the bladder [1].

Congenital anomalies of the kidney and urogenital system range from mild, asymptomatic malformations to severe, life-threatening pathologies and complex ethical dilemmas. Many congenital abnormalities are part of a syndrome whose impact extends beyond the urogenital system - for example, there are some congenital urological abnormalities leading to oligohydramnios and, therefore, severe pulmonary problems.

Sometimes treatment is possible, including treatment in utero. Advances in prenatal diagnosis, fetal surgery and targeted therapies have improved the prognosis and quality of life in affected families [2].

A pelvic kidney: is a normal kidney located in the pelvis, instead of the abdomen. This occurs when a kidney does not ascend from its original location in the pelvis to its final location during fetal development. Typically, the kidney functions normally despite being in the wrong location. Often a person with a pelvic kidney will go through their whole life not even knowing they have this condition, unless it is discovered on newborn kidney ultrasound screening or if complications arise later in life for this or a completely different reason, and during investigations the condition is diagnosed. Pelvic kidneys occur in 1 in every 500 people in the U.S. It is not a harmful condition generally, but can develop complications [3].

CTU: Computed tomographic urography (CTU) is a noninvasive modality for evaluating the renal system and planning treatment strategies [4].

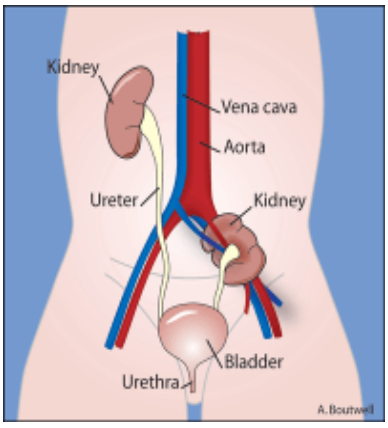

Fig-1: Diagram shows the pelvic kidney

CASE REPORT

27years old male patient came to the hospital referred from ultrasound department. The ultrasound reported that there are empty renal fossae. Either ectopic pelvic kidney and absent other one. The patient complaining of hematuria, fatigue, and lower back pain. CT urography was done and the CT image in fig1,2,3,4 below.

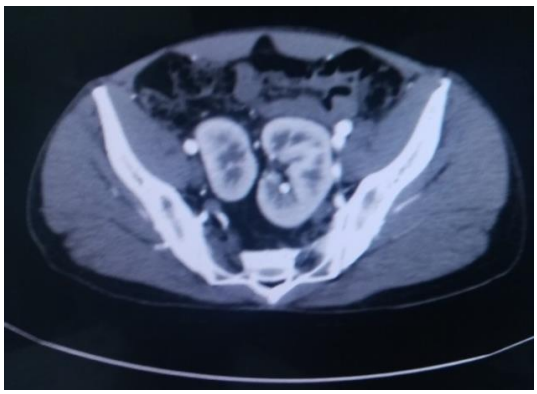

Fig-1: Axial CTU shows both kidneys in the pelvis arrows

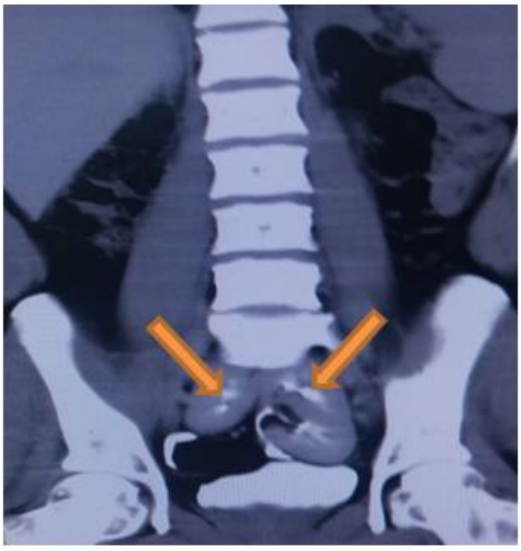

Fig-2: Coronal CTU shows both kidneys in the pelvis arrows

Fig-3: 3D CTU shows both kidneys in the pelvis arrows

Fig-3: 3D subtracted CTU shows both kidneys in the pelvis arrows

DISCUSSION

During embryologic development kidneys ascent to their normal retroperitoneal position, any arrest or abnormal migration leads to ectopic location of that kidney. Several pathologies may be related to congenital anomalies of urinary tract, 40% of these pathological conditions are due to variations in number, position, shape, and size of the kidney, ureter, or bladder [4]. Because of the greater risk of injuring aberrant vessels or overlying abdominal viscera and nerves, the pelvic kidney presents special treatment challenges. Multi-slice CT and 3D-CT angiography is an appropriate imaging modality when surgery is required for removal of an ectopic kidney [5]. Pregnancy and labour with maternal renal pelvic ectopia provides a unique challenge to the obstetricians attempting to prevent damage to the kidneys during labour and allow safe delivery [6]. The factors that may interfere with the renal developmental anomalies are teratogenic agents, genetic factors, chromosomal abnormalities, disorders in fusion mechanism of the ureteric bud with metanephric blastema, and various medications ingested by the mother [7]. Ectopic kidneys may be associated with other congenital anomalies with genital anomalies being the most common (15%-45%) [8].

REFERENCES

1. Walter F. Boron. Medical Physiology: A Cellular and Molecular Approach. Elsevier/Saunders. 2004;1-4160-2328-3.
2. Rodriguez MM. Congenital Anomalies of the Kidney and the Urinary Tract (CAKUT). Fetal Pediatr Pathol. 2014 Oct-Dec33 (5-6):293-320.
3. Walsh P, Gittes R, Perlmutter A. Campbell"s Urology, Second Volume, Fifth edition. Philadelphia, WB Saunders. 1986; p 1674-5.
4. Williams PL, Bannister LH, Berry MM. Gray's anatomy in embryology & development, Urinary System, Churchill Livingstone, London, UK, 38th edition. 1995; pp. 199-204.
5. Mahmoudnejad N, Danesh A, Abdi H. Renal cell carcinoma in presacral pelvic kidney. J Pak Med Assoc. 2009; 59:482-483.
6. Meizner, Barnhard Y. Bilateral fetal pelvic kidneys: documentation of two cases of a rare prenatal finding, Journal of Ultrasound in Medicine. 1995; 14:487-489.
7. Gulsun M, Balkanci F, Ekirge SC, Deger A. Pelvic kidney with an unusual blood supply Angiographic findings. Surgical and Radiologic Anatomy. 2000; 22:59-61.
8. Downs RA, Lane JW, Burns E. Solitary pelvic kidney, and its clinical implications. Urology. 1973; 1:51-56.