Crossed fused Right Renal Ectopia with Right sided polydactly:- A Case Report

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ABSTRACT

Crossed fused ectopia is a renal congenital anomaly. It is remarkable for its associated anomalies in urogenital and other systems. Ectopic kidney occurs as a result of a halt in migration of kidneys to their normal locations during the embryonic period. Usually it is asymptomatic, but commonly the presenting feature is an abdominal lump. Proper knowledge of morphological variations of kidney and vessels supplying it are essential not only for anatomists but also for urologists. A sound knowledge of these variations assist in the diagnosis and management of renal anomalies. We present a case of unilateral ectopic kidney with polydactyly managed in our centre.

1. Introduction

Ninety percent of crossed ectopic kidneys are fused to the ipsilateral kidney. Most patients have concomitant urinary pathology, which makes kidney susceptible to infections and obstruction. During embryonic development, the fetal kidney first appears as buds inside the pelvis, near the bladder. As the fetal kidneys develop, they climb gradually toward their normal position, below liver on right side and behind spleen on the left side. Sometimes, one of the kidneys fails to complete the climb and it may remain in the pelvis. Sometimes the kidneys ascend toward the rib cage, but one may cross over so that both kidneys are on the same side of the body. When a crossover occurs, the two kidneys may grow together and become fused, but ureter of the ectopic kidney crosses the midline, following the normal course to open in its normal position in the urinary bladder as is shown in Fig 1. Renal ectopia may present a diagnostic problem when acute disease develops in the kidney and there is always a danger that an unwary surgeon may be tempted to remove it as an unexplained mass. Crossed renal ectopia patients are usually asymptomatic and are detected at autopsy or incidentally during radiological investigations.

The Case:

A 22 year old female presented to our OPD with complaints of right abdominal pain over a period of two years. She had no lower urinary tract symptoms except mild dysuria. She gave a history of…
The Discussion:

Most cases of crossed renal ectopia are relatively uncommon congenital anomalies and bilateral crossed ectopia is considered the rarest form. In crossed ectopia, one kidney crosses over to opposite side and parenchyma of two kidneys fuse. Most commonly the upper pole of the inferiorly positioned ectopic kidney is fused to lower pole of superior normally positioned kidney, the ureter of ectopic kidney crosses the midline and enters the bladder in normal position.

Crossed fused ectopia is typically asymptomatic and the diagnosis is an incidental finding when patient is being examined for other medical diseases. When symptoms do occur, the most common symptoms are abdominal or flank pain, palpable mass, hematuria, dysuria and urinary tract infections, as in our case, patient presented with pain over right side of abdomen. Abnormal positioning of kidney can lead to predisposition to hydronephrosis, calculi and infection but in our case, patient had both the kidneys functioning with no back pressure changes. Complete renal fusion also called cake kidney, remains asymptomatic and is detected on autopsy only, entire renal substance is fused, lying in pelvis and giving rise to two separate ureters which enter bladder.

The ectopic kidney may not be fused, but fusion is more common than non-fusion. Crossed ectopic kidney may be discovered by chance. Crossed ectopia may be associated with Turner's syndrome. Various congenital anomalies with the urogenital system have been described. These are: Multicystic dysplasia in a fused or unfused crossed kidney, ureterocele, patent urachus, hydronephrosis, ectopic ureteral orifice, hypospadiasis etc.

Our patient had the right to left variety of crossed ectopic kidney. The renal function of both kidneys was normal as evidenced by normal blood tests and normal renal cortical appearances after intravenous contrast administration.

Tests which can be used to investigate renal ectopia are ultrasonography and I.V.U. Anatomical delineation is best achieved by I.V.U., it can also give an idea about ureteric displacement. In our patient, presenting with abdominal pain without any fever and dysuria, it was after exclusion of other pathologies and investigations that the cause of abdominal pain was attributed to chronic constipation.

When a kidney is out of the normal position, drainage problems are likely. Sometimes urine can even flow backwards from the bladder to the kidney, a problem called vesicoureteric reflux. Abnormal urine flow can set the stage for some of the problems associated with ectopic kidney such as infections, stones and renal impairment.

Conclusion:

The treatment options vary with the presence of symptoms or complications. If the urinary function is normal with no evidence of urinary tract blockage, no treatment for ectopic kidney is needed. If IVU shows that obstruction is present, surgery may be need to correct the position of the kidney to allow for better drainage of urine. To correct reflux, the ureter is reimplanted into the bladder. If extensive renal damage has occurred, nephrectomy is indicated.

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