PELVIC KIDNEY CALCULI MIMICKING APPENDICITIS: A CASE REPORT

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INTRODUCTION

Congenital anomalies were the 7th leading cause of disability over the world in 1990, numbering 13.5 millions (2.9% of total disability) and 9th leading cause of disease burden over developing world in 1990 numbering 29.4 millions (2.4% of total disease). But however, the incidence of major congenital urinary tract anomalies has been reported as 0.14%, minor asymptomatic anomalies may occur in 10% of all life-birth.[1] Ectopia, or displacement, of a kidney is a common renal anomaly. The pelvic kidney, in which, cephalad "migration" of the kidney does not occur, is the simplest form of renal ectopy.[2]

CASE REPORT

A young unmarried female, 16yrs. Old came to CNMU Rangpur, with the complains of lower abdominal pain of 3 days. According to her statement, she suffered same type of lower abdominal pain for 3 times in the last 1 yr. Some of the physicians suspected it as acute appendicitis. This time her physician asked for ultrasonography (USG) of KUB region. USG reveals normal right kidney, but left kidney is not seen in the normal position, but found in lower abdomen in midline near the urinary bladder. There are multiple tiny bright calculi seen (Fig. 1) in the pelvic kidney with mild pelvicalyceal dilatation. We advised the patient for DMSA-Scan, but unfortunately the patient did not come.

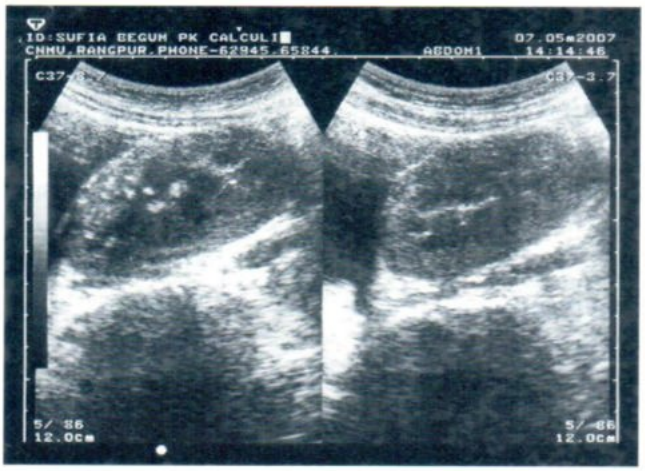

Fig. 1 Tiny calculi in pelvic kidney seen in ultrasound scan

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DISCUSSION

The initial stages of kidney development occur within the fetal pelvis. Through the process of differential growth, the developing kidneys ascend into the abdomen and eventually achieve their adult location, at the approximate level of the first lumber vertebra. Except for being displaced, most pelvic kidneys are normal developmentally, and these normal kidneys are easily recognised with ultrasound.

In this congenital random anomaly, the kidney remains, in on the proper side of the body, but is positioned lower than normal, either in the iliac fossa or in the pelvis. The displaced kidney may be asymptomatic and detected incidentally by physical examination during an imaging procedure. Occasionally, however, a pelvic kidney is grossly abnormal in appearance, because it is affected by dysplasia, duplication anomalies, vesico-ureteral reflux, and/or hydronephrosis. These abnormal kidneys are easily mistaken for cystic of solid masses or abnormal segments of bowel. Diagnostic error may be avoided of the ipsilateral renal fossa is examined routinely in patients with pelvic, pathology. The empty renal fossa should be a significant clue as to the nature of the pelvic mass.[2] Ectopic kidneys, for example, pelvic kidney can usually be more easily identified and investigated by radiopharmaceutical as a whole body search can be undertaken if necessary, whereas a small pelvic kidney, especially if it is poorly functioning, can not always be seen against the background of the pelvic bone.[3]

In 1970.s two excellent renal agents DTPA (diethylene triamine penta acetic acid) and DMSA (dimarcepto succinic acid) have been developed.[4] To detect a missing kidney DMSA is better than DTPA as DMSA is bound to the cortex and only a smaller fraction is excreted into the urine. Even if there is a small amount of renal tissue, it will concentrate the agent and will show the presence of a kidney wherever located. The principal advantage of DMSA is its relatively prolonged and stable retention in the kidney.[4] DTPA is a glomerular agent and shows both anatomical and functional status of kidney.[3] Nahar et al. reported a case of ectopic functioning left kidney which was missed by both USG and intravenous urography (IVU), but both DMAS and DTPA radionuclide techniques ware successful in detecting the kidney.

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