CASE REPORT

IPSILATERAL RENAL AGENESIS WITH MEGAURETER, BLIND END PROXIMAL URETER AND URETEROCELE IN AN ADULT

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We reporting unilateral renal agenesis with ipsilateral ureterocoele, mega ureter and blind end proximal ureter in same patient first time as case report and has not been so far reported in local or international literature. Ultrasound, CT scan and intravenous pyelography performed which confirm the case. Patient presented with left lumber and pelvic pain on and off and history of recurrent urinary tract infection.

Keywords: Renal agenesis; Megaureter; Ureterocoele

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INTRODUCTION

Renal agenesis is generally thought to result from a lack of induction of the metanephric blastema by the ureteral bud, which may be secondary to ureteral bud maldevelopment and/or due to a problem with the formation of the mesonephric duct. Uncommonly, post-natal involution of multi-cystic dysplastic kidneys results in solitary kidney. Unilateral renal agenesis is usually an incidental finding with the contra lateral kidney demonstrating compensatory Hypertrophy.[1] Primary megaureter is an inherently compound term that includes all cases of megaureter due to an idiopathic congenital alteration at the vesicoureteral junction. In practice, a ureter with a diameter of 7 mm or more should be considered a megaureter.[2] Ureterocoele represent cystic dilatation of the intravesical segment of the ureter. Ureterocoele may be associated with either a single or a duplex ureter. The congenital defect is the obstruction of the meatus, and the ureterocoele is simply a hyperplasic response to this obstruction. Ureteral duplication is present in about 75% of patients with ureterocoele.[3] Unilateral renal agenesis can also be associated with other urologic abnormalities in 48% of patients, including primary vesicoureteral reflux (28%), Obstructive megaureter (11%), and ureteropelvic junction obstruction (3%).[4]

CASE REPORT

30-year male patient presented with left lumber and left lower quadrant pain and recurrent urinary tract infection relieved by medications. No fever was present. Total leukocyte count was normal. On examination tenderness was present in left pelvic area. Labs revealed RBC 40 and WBC 50 on high power field in urine detail report. Transabdominal ultrasound show normal right kidney and absent left kidney and no kidney was found in left renal area and in the pelvis (in the line of renal bud descent) as well as left mega ureter and ureterocoele at left vesicoureteral junction in intramural part of distal end of left ureter.

Intravenous pyelography showed normal right kidney, urinary bladder and ureter as well as Ureterocoele on left side with left mega ureter showing proximally blind end and non-visualization of left kidney. CT scan abdomen was also performed with intravesical and intravenous contrast which confirmed the ultrasound findings. CT scan showed absent left kidney with mega left ureter, simple ureterocoele at distal end of left ureter. Proximal end of left ureter was blind ended. RT kidney, ureter and urinary bladder were normal (Figure 1–5)

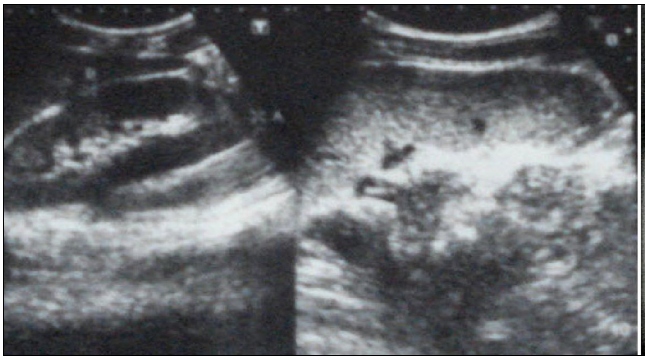

Figure-1: Ultrasound kidneys (right kidney is visualized but left kidney is not visualized in left renal bed)

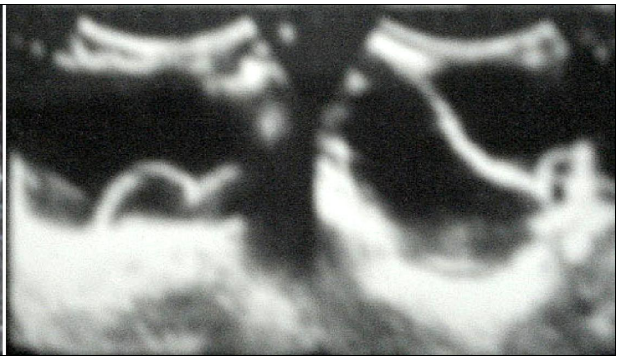

Figure-2: Ultrasound ureter and urinary bladder (left sided mega ureter and ureterocoele are identified)

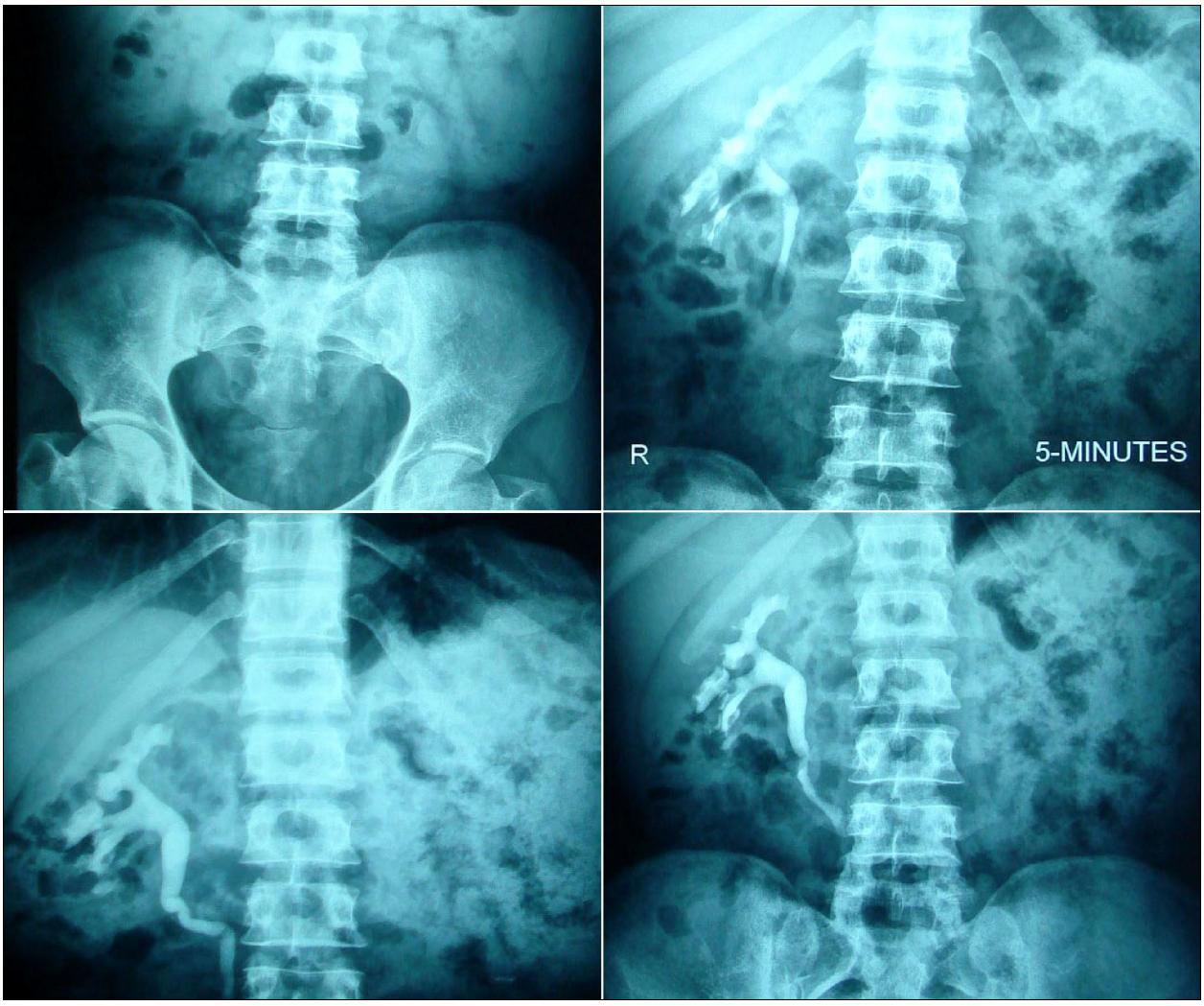

Figure-3: Intravenous pyelography (no contrast excretion seen from left kidney and. Left kidney is not visualized)

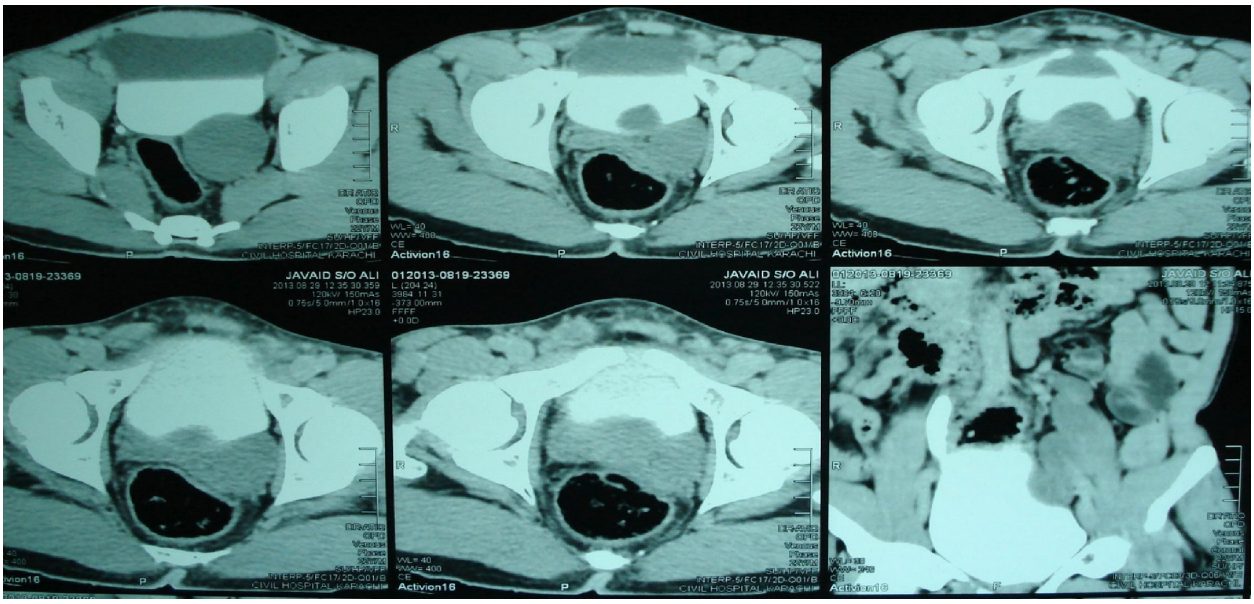

Figure-4: CT scan abdomen and pelvis axial and coronal post contrast mega ureter and left ureterocoele)

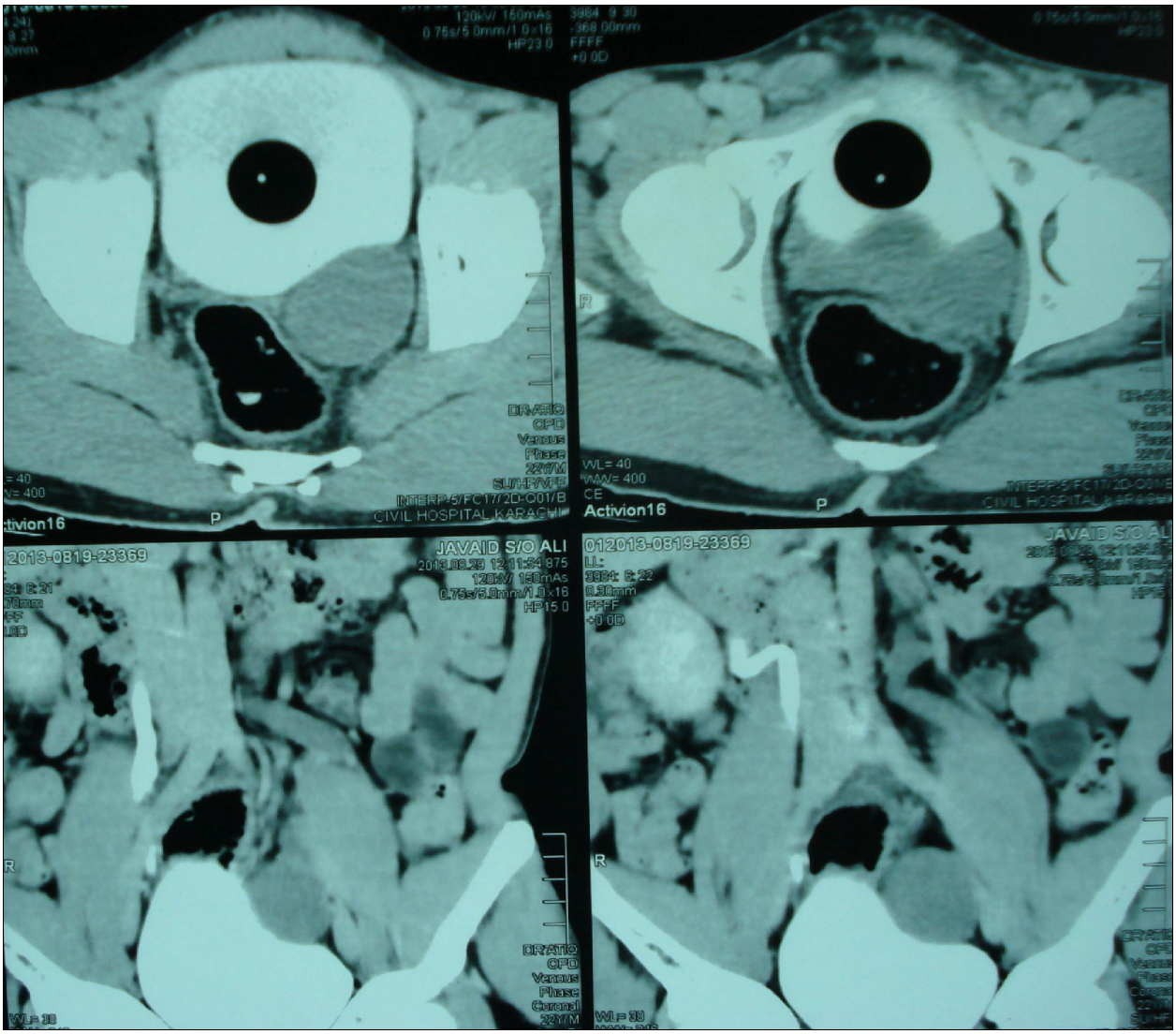

Figure-5: CT scan abdomen and pelvis axial and coronal post contrast images (left side blind ended proximal ureter, mega ureter and ureterocoele)

DISCUSSION

Renal agenesis is not uncommon anomaly but combination of unilateral renal agenesis, ureterocoele is rare while renal agenesis, ureterocoele and proximal blind end ureter on ipsilateral side is extremely rare[5] and only four cases so far have been documented in international literature. Our case which is combination of renal agenesis, ureterocoele and proximal blind end ureter on ipsilateral side along with megaureter has not been so far reported.

Renal agenesis is generally thought to result from a lack of induction of metanephric blastema by the ureteral bud, which may be secondary to ureteral bud maldevelopment and/or to a problem with the formation of the mesonephric duct. Less commonly, after birth involution of multi-cystic dysplastic kidneys results in solitary kidney. Unilateral renal agenesis may be associated with ipsilateral genitourinary anomalies.[6] The interest of this case lies in the association of unilateral renal agenesis with ipsilateral ureterocoele, mega ureter and blind ended ipsilateral proximal ureter. Presentation of this patient was recurrent urinary tract infection but no early radiographic investigations were carried out.

It is necessary to carry out early investigation in these kinds of cases as surgery to remove left ureter would be curative in this case in order to save contralateral urinary tract from ascending retrograde infection and damage because this would minimize morbidity and save the life.

CONCLUSION

It is necessary to investigate congenital urinary tract anomalies early in order to avoid delay in diagnosis and complication associated with these anomalies and increase in mortality and morbidity. So if young patients presents with recurrent lumber pain, dysuria, and urinary tract infections then carry out base line investigations such as ultrasound and or intravenous pyelography and then if needed, proceed to CT scan or MRI for further evaluations. Once it is confirmed by imaging that left kidney is absent then Surgery would be ultimate option to remove left ureter in order to save contralateral urinary tract from retrograde and ascending infection and related complications.

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