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A Rare Case Report Of Urinoma In Pregnancy With Successful Outcome

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Abstract
Urinoma is peripelvic extravasation of urine seen as a sequel of urinary trauma or stones. Urinoma is very rare in pregnancy. Urinoma can present as acute abdomen in pregnancy. Herewith, we are presenting a case of urinoma in pregnancy who presented to niloufer hospital, hyderabad at 12 weeks of gestation. We are describing how regular antenatal checkups, multidisciplinary approach throughout antepartum, intrapartum and postpartum period helped us in delivering a healthy baby together with keeping the mother in good health. Hence, prompt followup during antepartum, intrapartum and postpartum period using multidisciplinary approach helped in preventing adverse events.

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I. Introduction :

Urinoma is peripelvic extravasation of urine seen as the sequel of urinary trauma or stones. The extravasated urine will induce tissue inflammation and fibrosis, which will result in formation of an encapsulated sac surrounding the aggregated urine. In majority of cases, cause is trauma and urinary tract obstruction. Spontaneous formation of a perinephric urinoma is very rare, especially in pregnant women. Herewith, we present a case of 23 year pregnant woman with urinoma of left kidney with no urologic symptoms or complications during pregnancy. She developed non severe preeclampsia at 30 weeks of gestation, underwent caesarean section and delivered a low birth weight baby and followed at sncu after admission. Multidisciplinary management done under urology and nephrology team and patient underwent laproscopic nephrectomy on day 80 post delivery in view of non functioning kidney.

II. Case Report :

A 23 year old primigravida with married life 1 year, with 12 week 4 day gestational age was referred to outpatient department of niloufer hospital, hyderabad in view of gross urinoma in left maternal kidney. On evaluation, patient had history of renal or ureteric calculi 2 year ago, for which she was given medical management. Later patient was asymptomatic. Her early pregnancy scan at 11 weeks revealed gross urinoma in left kidney and was referred to niloufer hospital for further obstetric care. Ultrasound revealed : evidence of grossly dilated pelvicalyceal system with no visible cortical tissue in left kidney. Right kidney was normal. Her hemogram, kidney function tests, complete urine examination was normal. Urine culture showed no bacterial growth. Urologist opinion taken, advised to repeat hemogram, kidney function test monthly and to be followed monthly as required. The collective opinion of urologist and nephrologist says no active intervention is needed and can be planned after delivery. Patient was under close surveillance by regular antenatal checkups. At 31 weeks of gestation, patient developed hypertension and was started on tab labetalol 100mg tid. Her hemogram, kidney function test, urine protein creatinine ratio, 24 hour urinary protein were normal. Antenatal investigations were normal. Fetal growth monitoring done and had growth restriction from 30 weeks onwards. Antenatal steroid coverage done and close monitoring of blood pressure and other vitals done. Emergency lscs was done at 35 weeks and delivered an alive female of weight 1.5 kg with apgar $^{8}{}_{9}$. Intraoperatively, a cystic mass of size about 20x20 cm is seen on left side retroperitoneally. Baby was admitted at sncu. Postoperatively, patient had malignant hypertension and was managed using intravenous labetalol. Magnesium sulphate was given using zuspan regimen for 24 hours. Hemogram, kidney function test were normal. Urine culture was sterile. Thromboprophylaxis was given for 3 days. Blood pressure was controlled with 2 drugs tab labetalol 100 mg tid and tab nifedipine 10 mg bd. Fundoscopy and 2d-echo was normal. Bilateral renal artery doppler was normal. Ultrasound showed left gross hydroureteronephrosis. Patient was discharged on post operative day 6 with baby. Patient was followed upto 6 weeks. Her blood pressure was normal with antihypertensives. Hemogram, kidney function test, complete urine examination were normal. Urine culture showed no bacterial

growth. Ultrasound showed right kidney is normal in size, normal echotexture, normal pelvicalyceal system. Left kidney is grossly dilated pelvicalyceal with anteroposterior diameter measuring 5.9 cm and cortical thickness measuring 5mm. Left ureter is dilated – left gross hydroureteronephrosis. Patient was reviewed by urologist at 6 weeks postpartum. Ct kub showed left kidney measures 195x84 mm. Left pelviureteric junction obstruction with gross hydronephrosis with thinned out renal cortex and ballooned out renal pelvis. Right kidney measures 123x54 mm extrarenal pelvis noted.

Radio-isotope renogram shows

	Gfr	Differential function	Parenchymal peak t-max
Left	8ml/min	8%	Grade iv curve
Right	95ml/min	92%	3.1 min

Impression : poorly perfudes, poorly delineated hydronephrotic left kidney showing gross functional impairment. Patient was advised nephrectomy and underwent laproscopic nephrectomy on day 80 post lscs in view of non functioning kidney.

III. Discussion :

Urinoma is an acute complication that occurs following an injury to the kidney or upper urinary tract. Urine extravasation as a result of renal trauma is common, but development of urinoma may only occur rarely. The conditions for formation of urinoma include impairment of the renal collecting system, urinary extravasation and ureteral obstruction.

Spontaneous extravasation of urine to the perinephric space and development of a maternal urinoma is an uncommon complication during pregnancy. Common cause include renal injury or urinary tract obstruction. In pregnancy, spontaneous rupture of kidney and renal tract rupture have been reported but development of urinoma is very rare. Urinoma on the left side is more rare than on the right side as uterus exerts more pressure on the right ureter. In pregnant woman, common etiology for renal parenchymal rupture are renal aneurysms and trauma. Calculi and obstruction of the lower urinary tract cause rupture of renal collecting system. In patients with renal parenchymal rupture, main aim is to stabilise the hemodynamic status as both mother and baby may be in danger.

Diagnosis of urinoma is mainly based on imaging studies using ultrasound as a primary tool. If ultrasound findings are abnormal, further tests include ct, mri or intravenous urography. Misdiagnosis may lead to delayed diagnosis leading to development of complications. Complications include hypertension, urinary peritonitis, renal atrophy and renal failure. Hence close monitoring of these patients is recommended. In pregnant woman with urinoma, kidney function on affected side should be monitored closely and intervene as soon as possible. Literature shows few cases were managed in pregnancy by putting dj stent.

IV. Conclusion :

Urinoma in pregnancy may manifest as acute abdomen. They may become symptomatic during pregnancy. They need close monitoring of maternal and fetal condition. In our case, though non severe preeclampsia and fetal growth restriction was there, outcome of baby is good and is under followup of neonatologist.

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