
CASE REPORT

A Rare Case of Abdominal Mass with 24 Weeks Pregnancy

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ABSTRACT

A 25 years old lady, G₂P₁A₀, presented with gestational ammenorrhoea of 24 weeks, abdominal distension with pain for the last 2 weeks. Pre operatively it was diagnosed as a 24 weeks singleton pregnancy with a large multilocular ovarian cyst. Intra-operatively we were able to diagnose it as a mass of left renal origin. Total ureteropelvic junction [UPJ] obstruction had caused gross renal enlargement. The patient was managed by left sided nephrectomy.

INTRODUCTION

Ureteropelvic junction obstruction [UPJO] is a well-recognized entity that may present at any time in life. However, usually patients present in infancy, childhood & in early adult life. Male to female ratio is the same. It is the most common site of obstruction in the upper urinary tract. Left kidney is more affected than the right by a ratio of 2:1. It can be clinically silent or lead to symptoms such as pain, chronic urinary tract infections, and urinary stone disease¹. Incidence of UPJO in the fetal life is 1:1000²

Finding of a total UPJO at 24 weeks gestation is purely coincidental & its incidence is unknown. Whereas finding of ovarian masses in pregnancy is quiet common. This reduces the level of clinical suspicion of a renal mass versus an ovarian mass. A pregnant patient could not be exposed to imaging modalities other than ultrasound. An ultrasound scan does not have the sensitivity and specificity to diagnose the origin of a huge abdominal mass, especially when it is occupying whole of the abdomen, in addition to a singleton pregnancy of 24 weeks. So our preoperative diagnosis in this case remained "pregnancy with ovarian mass". The patient needed laparotomy, as the nature of her symptoms was acute. The story unfolded only intraoperatively.

CASE REPORT

A 25 yrs old lady, G₂P₁A₀, presented to out patient department of Lady Willingdon Hospital Lahore with gestational ammenorrhoea of 6 months, low grade fever for 2 months, pain abdomen with rapidly growing abdominal distension for 2 weeks and Pain left lower abdomen, not relieved by medication for the last 3days. She had no other complaints throughout this pregnancy. She had quickening at 16

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weeks of gestation and since then she perceived normal fetal movements.

For the last 2 months she started having low grade off & on fever, for which she took medication from her local general practitioner. For the last 2 weeks, she started having pain in the whole abdomen along with rapidly growing abdominal distension. Initially this pain used to be relieved with medication but for the last three days, it was not relieved by any medication. There was no history of (H/O) anorexia, weight loss, urinary and bowel complaints. The patient was referred to Lady Willingdon Hospital Lahore by her general practitioner for management.

Regarding her obstetric history, she was married for 2 Years, G₂P₁A₀, last child born, one and half years old, alive and healthy male baby. Her previous Pregnancy was full term, delivered at home with no antenatal, intrapartum & postnatal complications. Her age of menarche was 12 years. Menstrual cycle remained 7/30 days with average flow and no dysmenorrhoea. There was no H/O of dyspnoea, intermenstrual or post coital bleeding.

There was nothing significant in her medical & family history. The lady was an uneducated housewife & belonged to a lower middle class family.

On admission, her Pulse was 88/minute, blood pressure was 120/80 mm Hg, oral temperature was 98.6 F⁰. There was no pallor, jaundice, cyanosis or clubbing of nails. Accessible lymph nodes were not enlarged. Breasts were normal. Her height was 157 cm and her weight was 55 kg. No abnormality was detected on systemic examination.

The abdomen was uniformly but grossly distended. There was fullness in both the flanks. The whole abdomen was occupied by a soft and cystic mass. It was smooth and non tender. Fluid thrill was positive. No other abnormal mass could be palpated.

The gravid uterus had been pushed to the right iliac fossa. Lie was longitudinal and cephalic with FHT of 130/minute. Striae gravidarum were present. There was no scar mark and there were no visible veins. Pelvic examination was not done.

Pre-operative investigations showed a B positive Blood group, Haemoglobin-9.6 gm/dl, liver & renal function tests were normal. Clotting profile was also normal. Hepatitis screening: was negative. Urine sugar & albumin: was nil. Intravenous pyelogram was not done.

The obstetrical and abdominal ultrasound scan showed an overall impression of a single, alive, intrauterine pregnancy of 24 weeks with a large multilocular, cystic ovarian mass. It was not possible to comment on liver, spleen, ovaries and kidneys because of huge size of the cystic mass.

Keeping in view ultrasound diagnosis of huge ovarian mass and acute nature of symptoms of the patient, a unanimous decision by consultants of the unit was taken to remove the mass on next day's operation list. A laparotomy was planned & one unit of blood transfusion was given pre-operatively. It is to be noted that we did not have any clue from history, examination & investigations to challenge the diagnosis of ovarian mass with pregnancy.

Examination under anaesthesia showed a cystic mass filling whole of the abdominal cavity and the gravid uterus being pushed to right iliac region. The abdomen was opened by a midline incision. Intraoperatively a multilocular cystic mass was filling whole of the abdominal cavity. Gut had been pushed to the right hypochondrium. The gravid uterus had been pushed to the right iliac region. The mass was obscuring most of the abdominal viscerae. It was not possible to comment whether the mass was intra or extra peritoneal. It was because of its huge size. Mass was drained with a 20 cc syringe. The drained fluid was clear and frothy. A 1x1 centimeter incision was given at the area of syringing and 6 liters of fluid came out. The mass deflated and the abdominal viscerae returned back to their normal position.

Both ovaries and fallopian were identified and were found to be normal. This negated our preoperative diagnosis of an ovarian mass. Both the broad ligaments were also normal, so it was not even a broad ligament cyst. These findings gave us a clue that it is a retroperitoneal mass of renal origin and 6 liters of fluid was actually urine. We traced the left ureter upwards from its attachment with the trigone of the bladder and it was found to be entering right into the mass. In this way the diagnosis of a left renal mass (30x30cm) was made. To further confirm the diagnosis and to assess the residual renal function, an intravenous bolus of Frusemide was given. Meanwhile a consultant urologist was called who diagnosed it as a grossly dilated left kidney secondary to total ureteropelvic junction obstruction. There was total absence of hydroureter. The calices of the kidney had atrophied due to pressure necrosis but were still identifiable.



Cut section of specimen

Keeping in view giant hydronephrosis and minimal renal function, decision was taken to do left sided nephrectomy. Urine output from hydronephrotic left kidney was only 10-15 cc as compared to 400cc from right kidney in 30 minutes time. A total left sided nephrectomy was done by the urologist. The size of the mass was even bigger than ultrasound findings. It measured 34 x 34 cm. Right kidney was palpated and was found to be of normal size. A drain was placed in the pouch of Douglas. The abdomen was closed in layers. Urine output in two hour procedure was 500ml. Intraoperative blood loss was approximately 500ml. One unit of whole fresh blood was given intraoperatively. Postoperative recovery was satisfactory and uneventful.

We were happy that we had managed a rare case of UPJ obstruction with 24 weeks pregnancy. However our worries were still not over. Two things were preoccupying our minds.

- Patient was at risk of miscarriage (patient had been counseled for that risk and she gave an informed consent for laparotomy as she was in severe pain for the last 4-5 days).
- Renal functional capacity of the sole right kidney of the patient.

Post operative management included intravenous antibiotics, avoid fluid overload and urinary tract infection and assess function of the sole right kidney with renal function tests and ultrasound scan. Tocolytics were started immediately after surgery.

In spite of being on tocolytic drugs, patient went into labour twelve hours after surgery. She delivered a female baby of 700gm as cephalic with complete placenta and membranes. There was no postpartum haemorrhage. Baby expired ten minutes after delivery in neonatal unit.

Histopathology report showed chronic inflammation with degenerated glomerular tissue.

Skin stitches were removed on 12th postoperative day. She was discharged next day with a one week follow up. On follow up, there were no complaints and

she was healthy with no abnormal clinical and ultrasound findings

DISCUSSION

Lady Willingdon Hospital Lahore is the biggest maternity hospital in Pakistan, working since 1935 and it was the first case of its nature in the history of this hospital. The rarity of the case can be better judged if we see it in international perspective.

This kind of Giant hydronephrosis secondary to PUJO in pregnancy was first reported over 50 years ago, and since then only 3-4 cases have been reported³ This explains the reason why we had a low index of clinical suspicion. On the other ovarian masses are so common in pregnancy. Conventional diagnostic tools for renal masses are intravenous pyelogram (IVP) and excretory pyelogram but we could not expose a 24 weeks pregnant patient to x-ray radiation. We did request the ultrasound scan but the ultrasound scan does not have the sensitivity to identify origin of such a huge mass especially when there is 24 weeks pregnancy as well. We do not blame the sonologist for failure to diagnose as we ourselves were able to diagnose it only after deflation of the mass, with drainage of 6 liters of fluid at laparotomy. It was a rare case and the diagnostic process was hampered by the presence of a 24 weeks intact pregnancy.

The query which needs to be addressed is whether nephrectomy was right treatment option for the patient. There is no difference of opinion that the patient ultimately needed nephrectomy. Had we been somehow able to diagnose it preoperatively, nephrectomy could have been delayed by percutaneous nephrostomy and route could have changed from abdominal to retroperitoneal one^{3,4,5}. We are trying to prove the point that nephrectomy was the most appropriate management option under the circumstances. A multidisciplinary approach is recommended to manage such cases and we adopted that approach. It is worthwhile to mention here that such a giant hydronephrosis cannot be left untreated to prolong pregnancy as recurrent urinary tract will itself lead to miscarriage in addition to the risk of rupture of hydronephrotic kidney³. However the fact remains that we came to know about it only retrospectively. We operated on the patient to relieve the persistent pain which was not responding to drugs anymore.

The next question which needs to be addressed is whether a 24 weeks singleton pregnancy can lead to total UPJ obstruction directly or indirectly? The literature does not favour such a happening with 24

weeks singleton pregnancy. The gravid uterus even at term does not compress ureteropelvic junction. There are case reports of obstructive renal failure by gravid uterus but in such cases obstruction is on lower ureter and that is on right side, not on the left side. In such cases the gestation had always been over 34 weeks and the pregnancies were either multiple or complicated by polyhydramnios⁶.

Last but not least is the question of the effects of unilateral nephrectomy on patient's future life and child bearing? Our patient is a young lady with only one alive child. She has to produce more children. Patient will need a close follow up for life in general & during pregnancy in particular to take care of her sole right kidney. As long as the sole right kidney is functioning normally and stays healthy, there are no adverse implications to conceive or regarding mode of delivery^{7,8}.

CONCLUSION

Whenever a patient presents with pregnancy and abdominal mass, origin of the mass should not only be considered to be an ovarian one. It can be an extraperitoneal one. This will help in improving fetal and maternal outcome.

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