A giant hydronephrotic pelvic kidney mimicking an ovarian cyst in a 34-week pregnancy

Okunade K.S.*, Sekumade A², Sajo A², Daramola E², Okojie O², Ojewola R.W³, Balogun O.S³, Afolabi B.B², Anorlu R.I¹

¹Department of Obstetrics and Gynaecology, College of Medicine, University of Lagos, Lagos, Nigeria. ²Department of Obstetrics and Gynaecology, Lagos University Teaching Hospital, Lagos, Nigeria. ³Department of Surgery, College of Medicine, University of Lagos, Lagos, Nigeria.

*Corresponding author: kehindeokunade@gmail.com, sokunade@unilag.edu.ng

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ABSTRACT

Background: A giant hydronephrosis is defined as a dilated pelvi-calyceal system with an amount of urine exceeding one Litre in the urinary tract of an adult. It can mimic several other clinical conditions including a huge ovarian cyst. An ectopic pelvic kidney with hydronephrosis in pregnancy is a rare occurrence. Aim: This study documents a case of giant hydronephrosis that was wrongly diagnosed as an ovarian cyst. Findings: A 36-year old primiparous with a giant hydronephrosis which was initially diagnosed as an ovarian cyst. She was planned for a laparotomy with caesarean section and ovarian cystectomy at 34 weeks gestation. She was delivered of a live female neonate. Further exploration was done which revealed a left ectopic kidney. She had a left simple nephrectomy because the kidney appeared totally unhealthy. Conclusion: There is a need to be careful when dealing with cystic lesions of the abdomen. A high index of suspicion is required and further imaging other than ultrasound scan such as computerized tomography or magnetic resonance imaging may be necessary to make accurate diagnosis.

Key words: Caesarean section, ectopic gestation, hydronephrosis, urinary tract, cystectomy, ovarian cysts

INTRODUCTION

An ectopic kidney is a congenital abnormality in which a kidney is located inferior, superior, or on the opposite side of its usual position.¹ About one in 900 people has an ectopic kidney giving a prevalence of 0.11%.² It is a pelvic kidney when it is located below the pelvic brim and one of its rare complications is hydronephrosis. A giant hydronephrosis is defined as a dilated pelvi-calyceal system with an amount of urine exceeding one Litre in the urinary tract of an adult.² A giant hydronephrosis can mimic several other clinical conditions such as ascites, intraperitoneal cysts, retroperitoneal cysts and ovarian cysts or tumours.³ Therefore patient may undergo an unnecessary surgical exploration, wrong treatment or at times even a nephrectomy. We report on a case of hydronephrosis in a 34 week pregnant woman who had a surgical exploration and subsequent nephrectomy of a giant pelvic kidney wrongly diagnosed preoperatively as an ovarian cyst.
CASE PRESENTATION

A 36-year old primiparous (gravida 2, para 1) patient presented, following referral from a private hospital, to the emergency department at 34 weeks’ gestation because of increasing lower abdominal pain of 2 weeks duration. The patient’s last confinement was 10 years earlier during which she had an elective Caesarean section due to severe preeclampsia. The child was alive and well. She had no associated history of fever, chills, vaginal bleeding or dysuria. Her medical history was unremarkable, and this pregnancy had been uneventful till about 2 weeks prior to her presentation at the referring hospital. She had an ultrasound scan done 1 week earlier which revealed a normal cysts with a coexisting huge adnexal mass. On examination, she was in painful distress, afebrile and anicteric. She had a blood pressure of 150/100mmHg and her pulse rate was 66 beats per minute, regular and with full volume. The abdomen was distended with an old sub-umbilical midline scar. It was slightly tensed with generalised tenderness that was more marked on the left lower quadrant. Fundal height and foetal parts were difficult to assess. Foetal heart rate detected using a hand held Doppler device was 146 beats per minute. The cervix was long and closed. Laboratory investigations revealed a normal full blood count, serum electrolytes, urea and creatinine, and urine microscopic findings (table 1). A bedside ultrasound scan showed a live singleton foetus at estimated gestational age of 35 weeks in transverse lie with coexisting left complex ovarian cyst measuring 50 x 30 x 15cm in diameter. The right ovary appeared normal and her left kidney was not visualised. The patient’s blood pressure was stabilised with oral alpha methyldopa at a dose of 500mg 8 hourly and she was planned for a laparotomy with caesarean section and ovarian cystectomy. However, intra-operatively the uterus was found to be obscured by the huge cystic mass measuring 45 x 25 x 20cm in diameter (figure 1) which was deliberately decompressed by draining about 15 litres of seropurulent fluid to gain access to the uterus. She subsequently had a caesarean section with delivery of a healthy live male neonate with birth weight of 2.6kg and apgar score of 7 and 9 in 1 and 5 minute respectively. Exploration of the abdominal cavity revealed a healthy normal sized right kidney with absence of the left kidney. Further assessment of the decompressed pelvic mass revealed that it was a left ectopic kidney, after which she had a left simple nephrectomy as the kidney appeared totally unhealthy to be left behind (figure 2). The patient did well postoperatively and was discharged on the 5th postoperative day. The histological examination of the cystic mass showed chronic pyelonephritis with marked dilatation of the pelvi-calyceal system. The patient was co-managed with the nephrologist and urologist and she has remained healthy with normal blood electrolytes, urea and creatinine till date.
Table 1: Summary of results of laboratory investigations

<table>
<thead>
<tr>
<th>S/N</th>
<th>Test</th>
<th>Result</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Complete Blood Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Haemoglobin</td>
<td>13</td>
<td>12-15g/dL</td>
</tr>
<tr>
<td>i.</td>
<td>Packed Cells Volume</td>
<td>36</td>
<td>35-44%</td>
</tr>
<tr>
<td>i.</td>
<td>White cells count</td>
<td>6</td>
<td>5.6-16.9 X 10⁹/L</td>
</tr>
<tr>
<td>i.</td>
<td>Platelet count</td>
<td>250</td>
<td>146-429 X 10⁹/L</td>
</tr>
<tr>
<td>2.</td>
<td>Electrolytes, blood urea and creatinine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Urea</td>
<td>6.1</td>
<td>3-11mg/dL</td>
</tr>
<tr>
<td>ii.</td>
<td>Creatinine</td>
<td>0.53</td>
<td>0.4-0.9mg/dL</td>
</tr>
<tr>
<td>iii.</td>
<td>Electrolytes</td>
<td></td>
<td>Within normal ranges</td>
</tr>
<tr>
<td>3.</td>
<td>Urine microscopy</td>
<td>No growth after 48 hours of incubation</td>
<td></td>
</tr>
</tbody>
</table>


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Conflict of Interest: None declared

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