

## Diagnostic Dilemma in Abdominal Pregnancy - A Case Report

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### Summary:

*Advanced abdominal pregnancy is a very rare and complex condition demanding challenging management. High index of suspicion may reduce the diagnostic error. Maternal mortality and morbidity is high and fetal outcome is poor. The key to favorable maternal outcome is early diagnosis and management. A case of 37 weeks abdominal pregnancy with fetal death has been reported here. The patient was repeatedly admitted in the Gynae*

*and Obstetric department in different units for unusual abdominal discomfort beginning from 20th weeks of pregnancy. But the diagnosis had been missed everytime. Finally, she reported with 37th week's pregnancy with intra-uterine fetal death. With high index of suspicion ultrasonography was done by an Obstetrician in the department which gave the diagnosis and was confirmed by laparotomy.*

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### Introduction:

Abdominal pregnancy is a rare variety of ectopic pregnancy that is implanted on structures in the abdomen other than the uterus, fallopian tubes, ovaries, ligaments. Incidence varies widely ranging from 1:1320 to 1:10,200 births<sup>1,2</sup>. It varies on different factors e.g. geographical, more common in developing countries (due to more prevalence of PID), socioeconomic status, level of medical care, degree of antenatal attendance<sup>1,2</sup>.

In abdominal pregnancy, foetus develops in the peritoneal cavity. Placenta grows in the surface of the abdominal organs e.g. pelvic peritoneum, broad ligament, uterus, omentum, intestine. These structures react by developing large blood vessels to serve placenta. Placental attachment remains insecure as the local decidual reaction is weak. So, retro placental and intra-abdominal hemorrhage is likely at any time threatening maternal and also foetal life. Foetal survival to term is rare. Placental insufficiency leads to fetal death at term if not delivered by

operation. In early cases, dead foetus may be absorbed completely or mummified or there may be adipocere formation, it may become infected or calcified, if not diagnosed and removed. In advanced cases where foetal bone is formed, they can be discharged through different organs which are bladder, rectum, pouch of Douglas or abdominal wall. If survives the foetus may become malformed due to pressure effect of abdominal organs<sup>3</sup>.

At laparotomy, placental management is the most challenging one. One should be prepared adequately and planned prior to laparotomy.

Regarding the diagnosis, diagnostic error is reported in 50%-90%<sup>4</sup>. Missing is very common. USG should be done very carefully with suspicion of abdominal pregnancy in mind. In this case, the patient was first reported at nearby clinic at 15 wks. At that time USG showed 16 wks normal viable pregnancy. Her pregnancy period was so uncomfortable that she got admitted 3 times in DMCH. For the first two times, diagnosis was missed clinically and was misguided by normal USG reports. Finally, when she presented at 37 weeks, the foetus was already dead.

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### Case Report:

A 22 years old housewife of poor socioeconomic condition hailing from Mugdapara, Dhaka, was admitted at Dhaka Medical College Hospital on 20.06.2006 at 4.30 pm.

She was primigravid and presented with pregnancy for 37 weeks with absence of foetal movement for 5-6 days. She also complained of occasional rise of

temperature for three months and slight pervaginal discharge for one day. At sixteen weeks of gestation, she first developed severe abdominal pain and reported to a local doctor and ultrasonography confirmed sixteen weeks viable pregnancy. At that time she was treated conservatively. Throughout her antenatal period she felt unusual abdominal discomfort.

Again, at twenty weeks of gestation she developed severe lower abdominal pain with respiratory distress and got admitted in Dhaka Medical College Hospital. She was treated conservatively with analgesics. Relevant investigation showed no abnormality and USG confirmed twenty weeks single viable pregnancy. Finally, she once again got admitted at thirty-seven weeks of gestation with the complain of loss of foetal movement for five to six days along with an ultrasonography report of thirty-seven weeks pregnancy with intra uterine foetal death. She also complained of fever and blood stained vaginal discharge for one day. She had no bladder or bowel problem.

On examination, she was very ill looking, anxious, malnourished, moderately anaemic. Her pulse was 110/min, blood pressure 110/70 mm of Hg, temperature 102<sup>0</sup> F, respiratory rate 28/min. Abdomen was distended, but no definite contour of pregnant uterus was observed. On palpation abdomen was tender and soft. Uterus was twenty weeks pregnancy size. A separate mass of about 10x7 centimeter was felt attached on the left size of the uterus with a cleavage in between. The mass was firm, ill defined, tender with restricted mobility. Foetal parts were felt superficially and lie was transverse. Foetal movement was not felt. Foetal heart sound was not audible. On pervaginal examination cervix was long, tubular, soft, os-closed, presenting part was not felt. Slight blood stained discharge was present. On investigation hemoglobin level was 9.8 gm/dl but other relevant investigations were normal.

The consultant suspected it as a case of abdominal pregnancy clinically and accordingly an ultrasonography was repeated by the obstetrician herself. On ultrasonography placenta like tissue was found outside the uterus over the fundus and uterus

was found as a separate mass. A dead foetus without any liquor amnii was detected in the abdominal cavity.

Decision of laparotomy was taken. On laparotomy, necrosed placenta was found attached with the left cornu and uterus was fourteen-sixteen weeks size. A dead macerated foetus was found within the abdominal cavity. The foetus was delivered by breech extraction. Placenta was easily separated and damaged side of uterus was repaired. After proper haemostasis and checking the other abdominal structures abdomen was closed in layer keeping a drain in situ. Patient received five units of blood transfusion during perioperative period. In the post operative period patient recovered satisfactorily.

#### **Discussion:**

Abdominal pregnancy is a rare variety of ectopic pregnancy with high maternal mortality i.e. 2% - 30%<sup>5</sup>. Mortality risk is 7.7 fold that of tubal pregnancy and 90 fold that of intrauterine pregnancy<sup>6,7</sup>. It is also associated with high morbidity<sup>8,9</sup> due to bleeding, infection, toxemia, anaemia, DIC, pulmonary embolism, fistula formation, etc. Reported high diagnostic error 50% - 90%<sup>4</sup> causes more mortality and morbidity. USG findings suggesting abdominal pregnancy defined by Allibone et al, at the end of 1<sup>st</sup> trimester or early 2<sup>nd</sup> trimester if followed may reduce the diagnostic error<sup>7</sup>. In this case, she had USG at 16 weeks, 20 weeks and at 37 weeks. All the reports were done by sonologists and they missed the diagnosis. Finally on admission the clinical suspicion of abdominal pregnancy helped to diagnose the case correctly by a repeat sonography by the obstetrician. Now a days CT scan and MRI have been successfully used to complement Sonography in making an accurate preoperative diagnosis. In fact, MRI is considered as the gold standard for diagnosis<sup>10</sup>. At lateral X-ray of the abdomen showing foetal parts overlying the maternal spine may also be helpful when more sophisticated modalities are not available. Elevated maternal serum alpha feto protein is also associated with abdominal pregnancy having extensive visceral implantation<sup>11</sup>. Ultimately, the diagnosis at an advance stage requires experience and a high index of suspicion on the part of clinician.

Perinatal mortality of abdominal pregnancy is high. For the management of abdominal pregnancy, factors such as maternal complication, foetal congenital abnormality, foetal viability, gestational age at presentation and the availability of neonatal facilities should be considered. If the foetus is dead, surgical intervention is generally indicated owing to the risk of infection and disseminated intravascular coagulation. Some clinicians, however recommended a period of observation of 3-8 weeks to allow atrophy of placental vessels<sup>12</sup>.

There has been some debate regarding the management of alive foetus. Some recommends immediate laparotomy, regardless of gestational age or foetal condition<sup>13</sup>. The reason is mainly based on the unpredictability of placental separation and resultant massive haemorrhage<sup>6</sup>. Some clinicians may adopt an individualized approach. If the pregnancy is less than 24 weeks, immediate operative intervention indicated because of the high risk of maternal complications and the poor prognosis for the baby if the pregnancy continues. Debate has arisen, however, concerning the appropriateness of a conservative approach in situations where the patient presents after 24 weeks gestation. Cases of the pregnancy being closely observed and surgery being delayed to allow time for the foetus to mature have been reported<sup>14</sup>. This approach requires close surveillance when the benefits to the foetus are weighed against the potential risks to the mother, such as the sudden onset of life threatening haemorrhage. The patient needs to be admitted to the hospital, where surgical expertise, anaesthesia and a 24 hour blood bank service is available. In our case, if the diagnosis could be established before foetal death, the foetus could be salvaged.

The management of the placenta in an abdominal pregnancy is still a matter of debate. Partial removal of the placenta may result in massive uncontrolled haemorrhage and shock, if the complete blood supply could not be ligated. Complete removal of the placenta should be done only when the blood supply can be identified and careful ligation possible<sup>15</sup>. When complete removal is not possible, the placenta is left in situ ligating the cord close to placenta. It has been estimated that the placenta can remain functional for approximately 50 days from the

operation and total regression of placental function is usually complete within 4 months<sup>16</sup>. The major complications observed were haemorrhage, sepsis, abscess formation, ileus and intestinal obstruction. In this study, in one case where placenta was left in situ was presented with sepsis, one month after primary operation<sup>17</sup>.

The follow up of the placenta, which is left in situ or partially removed, is done with serial beta HCG levels and sonogram. Role of postoperative methotrexate is currently controversial, since it often leads to severe infection and abscess formation due to accelerated placental destruction with necrotic tissue accumulation. Besides, spontaneous placental resolution does occur in majority of the cases. However, methotrexate is still favoured by some and has been used successfully in a dose of 50mg/m<sup>2</sup> intramuscularly every 3 weeks for four cycles in combination with preoperative arterial embolization<sup>4</sup>

#### Conclusion:

Abdominal pregnancy is a rare entity with high diagnostic error of 50% - 90%. Diagnostic missing is very common. High index of suspicion is necessary for diagnosis. USG done by the a devoted Obstetricians may give early diagnosis due to better clinical correlation.

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