

**Case Report:**

**Advanced abdominal pregnancy managed at Ambo hospital: A case report**

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**Abstract**

*Abdominal pregnancy is a potentially life-threatening form of ectopic pregnancy with a world-wide incidence of 1:3300 to 1:10200 births. Its incidence appears to be increasing in both the developed and developing worlds. It is associated with a high maternal and perinatal mortality. This paper reports a 35 years old G II P I mother from Gindeberet locality, West Shoa, who presented with signs and symptoms of intestinal obstruction in the third trimester of pregnancy which was later diagnosed to be an advanced abdominal pregnancy. Literature is reviewed and challenging diagnostic and management problems are discussed.(Ethiop. J. Reproductive Health, May 2007, 1 (1): 44-51)*

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**Introduction**

About 2% of all pregnancies are ectopic, accounting for 10% of all pregnancy related deaths (1). More than 95% of ectopic pregnancies occur within the fallopian tubes (2).

Abdominal pregnancy, a rare variety of ectopic pregnancy, is defined as an intra-peritoneal implantation that is exclusive of tubal, ovarian or intra-ligamentous implantation. The world-wide incidence ranges from 1:3300 to 1:10200 births and accounts for 1 to 4% of all ectopic pregnancies (3-7). Even more uncommonly does it reach an advanced stage of gestation, and a viable abdominal pregnancy with a successful outcome is a rare event (8-10).

The condition is associated with very high maternal mortality, with reported rates of 0.5 to 18% (1). The major cause for this is massive hemorrhage which may occur during pregnancy, during surgery or in the post operative period. Similarly, the condition is associated with very high perinatal mortality rate of about 95% (1, 11). This is attributed to preterm deliveries resulting from active intervention, done in the majority of the cases as soon as the diagnosis is made.

Diagnosis of abdominal pregnancy is difficult and often missed (1, 4). Symptoms and signs such as abdominal pain, gastro-intestinal symptoms, painful fetal movements, abnormal presentations, uneffaced and displaced cervix, vaginal bleeding, palpation of pelvic mass distinct from the uterus, inability to stimulate uterine contraction with oxytocin, are considered suggestive evidences of an abdominal pregnancy (3, 4).

This paper reports a 35 years old gravida two para one mother who was 7 months pregnant and presented with sign and symptoms of intestinal obstruction and later diagnosed to have an advanced abdominal pregnancy which was managed at Ambo hospital.

**Case Report**

The patient was 35 years old gravida two para one mother from Gindeberet, West Shoa, who was amenorrhic for seven months with abdominal pain and failure to pass feces for one week with subsequent failure to pass flatus and vomiting of ingested material since one day prior to her presentation to Ambo Hospital, West Shoa, Ethiopia.

Initially she was seen at the surgical department and was admitted as a case of intestinal obstruction in the third trimester of pregnancy. After further work up she was transferred to the obstetric department with the diagnosis of advanced abdominal pregnancy.

She had no antenatal follow-up. She said that pregnancy was uneventful before the onset of the above symptoms. She used to feel fetal movements. She is married and a farmer.

During examination, she was acutely sick looking. Vital signs were stable with blood pressure of 120/60 mmHg, pulse rate of 88/ min, and a temperature of 36.6 degrees Celsius.

On abdominal examination, it was grossly distended and difficult to appreciate fetal parts and presentation. Abdomen was diffusely tender with hyperactive bowel sounds. Fetal heart sounds were heard.

On pelvic assessment, cervix was closed uneffaced, and it was pushed anteriorly. There was a soft bulge at posterior cul-de-sac.

Hematocrit was 30% and on abdominal ultrasound examination there was an alive fetus and it was difficult to measure BPD because of irregular

contour of the skull bones. There was scanty amount of amniotic fluid. There was small sized uterus posterior to urinary bladder. Just posterior to the uterus, there was a homogenous echogenic mass occupying the posterior cul-de-sac and which looked like the placenta (Fig.1).

With the assessment of an abdominal pregnancy and intestinal obstruction laparotomy was performed, and the intra-operative finding was that there were grossly distended small bowel loops. When the small intestine was exposed, there was an intact gestational sac free in the peritoneal cavity extending to the posterior cul-de-sac and there was a viable fetus inside the sac. The urinary bladder was edematous and non pregnant size uterus was found just posterior to bladder. The fallopian tubes and both ovaries were intact but edematous.

What we did was that we opened the gestational sac and clear liquor came out. A female fetus weighing 900g was extracted. The placenta was found in the cul-de-sac and it had attachments to the posterior wall of uterus, pelvic peritoneum of posterior cul-de-sac and part of anterior wall of rectum. It was

removed completely with the gestational sac. Peritoneal cavity was lavaged with copious amount of saline.

Post operative hematocrit was 20% and the patient was put on IV triple antibiotics and she was supplemented with iron tablets for 3 months. She was discharged on the sixth post operative day with improvement and was appointed to regular Gynecologic OPD but she was lost to follow up.

On examination of the fetus there were deformities over the head and both lower extremities. She was put under radiant warmer, oxygen through nasal catheter was given, and NG tube was inserted for feeding. Umbilical catheterization was attempted by the pediatrician but failed. The fetus was able to survive for 36 hours then expired (Fig.2).

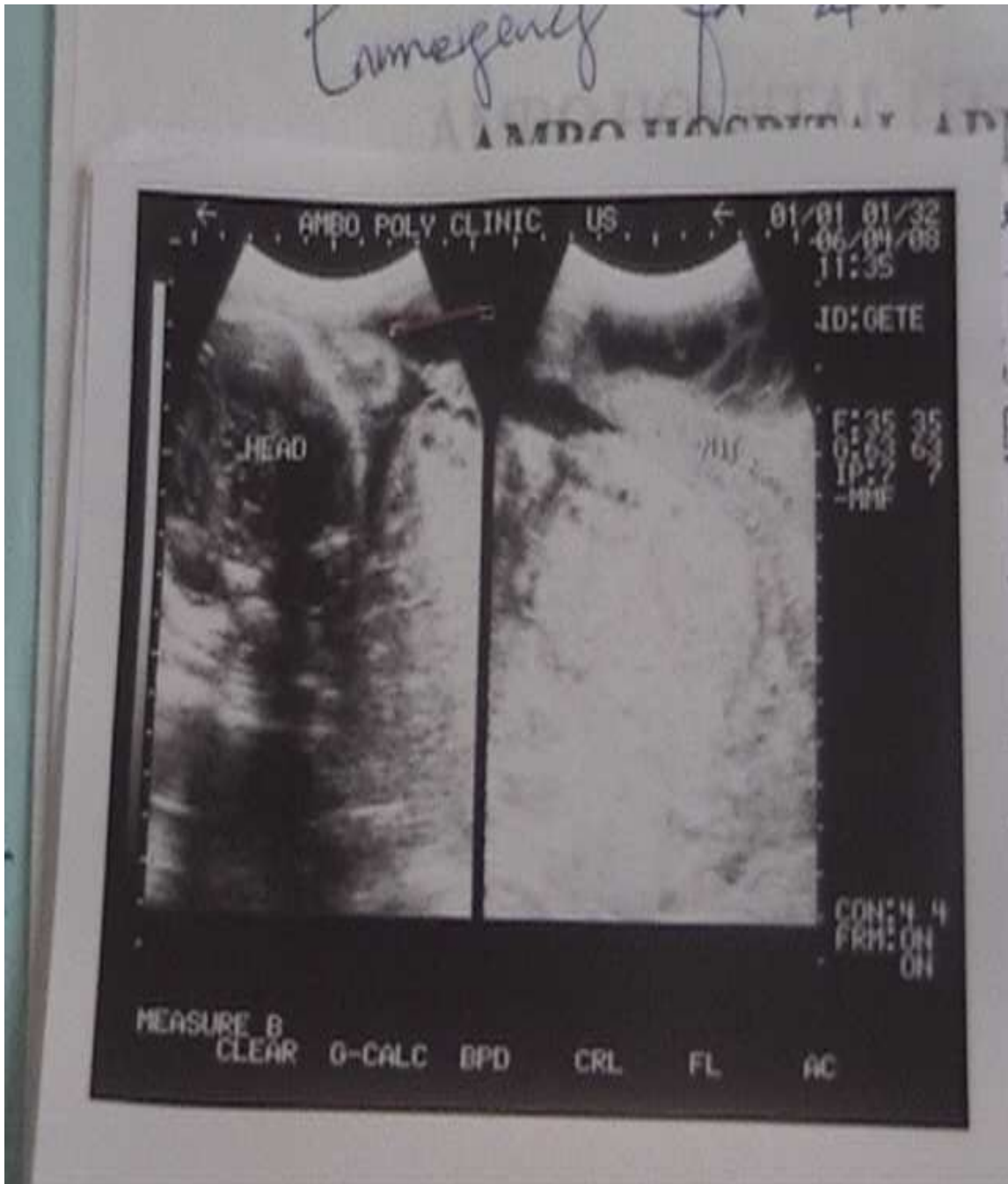


Fig.1: Abdominal ultrasound showing an empty uterus separate from the gestational sac and the deformed fetal skull.



Fig.2: The fetus from abdominal pregnancy with multiple compression deformities

### Discussion

The incidence of abdominal pregnancy appears to be increasing in both developed and developing countries (11). In the former, increasing use of assisted reproductive technology with embryo transfer has been associated with increasing numbers of heterotopic pregnancies (12-15). In developing countries, particularly in the rural areas, a high incidence of abdominal

pregnancies is reported, presumably due to restriction of human resources and diagnostic facilities, and poor utilization of medical care by pregnant women (16-18). Under both circumstances, some undiagnosed tubal pregnancies may abort into the peritoneal cavity, implant and continue into advanced abdominal pregnancies.

The clinical presentation depends on the gestational age: in the first trimester,

symptoms are similar to those of tubal ectopic pregnancies. In the second or third trimesters, the diagnosis may be suspected because of an abnormal fetal presentation, signs and symptoms of intestinal obstruction, displaced uterine cervix or easily palpable fetal parts (6). In our case, the patient presented with signs and symptoms of intestinal obstruction in the third trimester of pregnancy.

To diagnose an abdominal pregnancy on ultrasound, one should try to delineate the uterus as a separate structure from the fetus and placenta. Sometimes even under best circumstances, and using sonography, the diagnosis is often missed (6, 19-21). On ultrasound examination of our case, it was possible to demonstrate intra-abdominal pregnancy with placental implantation outside a non pregnant size uterus.

CT scan and MRI have been used successfully to complement sonography in making an accurate diagnosis of abdominal pregnancy (1, 22-25).

Once the diagnosis is made, optimal management requires careful evaluation and planning. If it is diagnosed in the first trimester or in early second trimester, the management is surgical

intervention without delay. However, due to late presentation of cases, the condition may remain undiagnosed until viable stage of gestation, i.e. after 24 weeks of gestation.

The major questions raised in such cases are related to the timing and mode of delivery. Although no consensus exists on the issue, a conservative approach is proposed in the absence of fetal gross malformation, placental implantation remote from the upper abdomen, good maternal condition, and close management in a tertiary care hospital (7). In our case, conservative approach had no place because she presented with signs and symptoms of intestinal obstruction.

Similarly, no consensus exists on the management of the placenta and each case is managed on an individual bases according to intra-operative findings. Regardless of gestational age, removal of placenta can result in hemorrhage. Unless the entire blood supply of placenta can be ligated, it is best to leave the placenta *in situ* and then follow the patient with serial B-hCG levels and sonography [6, 24, 28]. In the present case, the implantation site was in the lower part of abdomen at *cul-de-sac*.

The major arterial supply of the placenta was identified and was ligated. The whole part of placenta with gestational sac was successfully removed. Since the patient came from remote area, it would have been difficult to leave the placenta behind and to have regular follow-up,

especially with the unavailability of B-hCG determination.

Some have advocated the use of methotrexate with varying degree of success. Risks associated with leaving the placenta *in situ* include bowel obstruction, fistula formation and sepsis as the placental tissue degenerates (1).

## References

1. Martin JNJr, Sessums JK, Martin RW, et al: Abdominal pregnancy: Current concepts of management. *Obstet Gynecol* 1988;71(4):549-57.
2. Neiger R, Welden K, Means N: Intramural pregnancy in a cesarean section scar. A case report. *J Reprod Med* 1998; 43(11):999-1001.
3. Bayless RB: Non-tubal ectopic pregnancy. *Clin Obstet Gynecol* 1987; 30(1):191-4.
4. Pasternoster DM, Santarossa C: Primary abdominal pregnancy. A case report. *Ninerva Ginecol* 1999;51(6):251-3.
5. Morita R, Tsusumi O, Kuramochi K, et al: Successful laparoscopic management of primary abdominal pregnancy. *Hum Reprod* 1996; 11(11):2546-7.
6. White RG: Advanced abdominal pregnancy, a review of 23 cases. *Irn J Med Sci* 1989; 158(4):77-8.
7. Geerinckx KR, Baekelandt M, Dauwe D, et al: An advanced abdominal twin gestation after primary infertility and after tubal pregnancy. *Eur J Obstet Gynecol Reprod Biol* 1987; 26(3):283-8.
8. Sapuri M, Klufio C: A case of advanced viable extra uterine pregnancy. *PNG Med J* 1997; 40(1):44-7.
9. Deneke F: Advanced abdominal pregnancy in an Ethiopian mother: A case report. *East Afr Med J* 1997; 74(8):535-6.
10. Bachorz T, Waszynski E: Abdominal pregnancy at term *Fetus-Ginekol Pol* 1994; 65(9):518-21.
11. Crabtree KE, Collet B, Kilpatrick SJ: Puerperal presentation of a living abdominal pregnancy. *Obstet Gynecol* 1994; 84(4pt2):646-8.
12. Scheiber MD, Cedars MI: Successful management of a heterotopic abdominal pregnancy following embryo transfer with cryopreserved-thawed embryos. *Hum Reprod* 1999; 14(5):1375-7.

13. Deshpande N, Mathers A, Acharya U: Broad ligament twin pregnancy following in-vitro fertilization. *Hum Reprod* 1999; 14(3):852-4.
14. Fisch B, Peled Y, Kaplan B, et al: Abdominal pregnancy following in-vitro fertilization in a patient with previous bilateral salpingectomy. *Obstet Gynecol* 1996; 88(4pt2):642-3.
15. Bassil S, Pouly JL, Canis M, et al: Advanced heterotopic pregnancy after in-vitro fertilization and embryo transfer, with survival of both the babies and the mother. *Hum Reprod* 1991; 6(7):1008-10.
16. Zvandasara P: Advanced extrauterine pregnancy. *Cent Afr J Med* 1995; 41(1):28-34.
17. Bugalho A, Carlomagno G: Advanced non-tubal ectopic pregnancy at the "Hospital Central" of Maputo (Mozambique). *Clin Exp Obstet Gynecol* 1989; 16(4):103-5.
18. Alto W: Is there a greater incidence of abdominal pregnancy in developing countries? Report of four cases. *Med J Aust* 1989; 151(7):412-4.
19. Moonen-Delarue MW, Haest JW: Ectopic pregnancy three times in line of which two abdominal pregnancies. *Eur J Obstet Gynecol Reprod Biol* 1996; 66(1):87-8.
20. El-Kareh A, Beddoe AM, Brown BL: Advanced abdominal pregnancy complicated by bilateral ureteral obstruction. A case report. *J Reprod Med* 1993; 38(11):900-2.
21. Costa SD, Presley J, Bastert G: Advanced abdominal pregnancy. *Obstet Gynecol Surv* 1991; 46(8):515-25.
22. Hall JM, Manning N, Moore NR, et al: Antenatal diagnosis of a late abdominal pregnancy using ultrasound and magnetic resonance imaging: a case report of successful outcome. *Ultrasound Obstet Gynecol* 1996; 7(4):289-92.
23. Qureshi RN, Chaudnuary N, Rizvi I, et al: Feticide followed by successful removal of pregnancy products in early abdominal pregnancy. *J Obstet Gynecol* 1995; 21(1):13-16.
24. Spanta R, Roffman LE, Grissom TJ, et al: Abdominal pregnancy: magnetic resonance identification with ultrasonographic follow-up of placental involution. *Am J Obstet Gynecol* 1987; 157(4pt1):887-9.

25. Wagner A, Burchardt AJ: MR imaging in advanced abdominal pregnancy. A case report of fetal death. *Acta Radiol* 1995; 36(2):193-5.
26. Shumway JB, Greenspoon JS, Khouzami AN, et al: Amniotic fluid alpha-fetoprotein (AFAFP) and maternal serum alpha fetoprotein (MSAFP) in abdominal pregnancies: correlation with extent and site of placental implantation and clinical implications. *J Mat Fet Med* 1996;5(3):120-3.
27. Yu S, Pennisi JA, Moukhtar M, et al: Placental abruption in association with advanced abdominal pregnancy. A case report. *J Reprod Med* 1995;40(10):731-5.
28. Bajo JM, Garcia-Frutos A, Huertas MA: Sonographic follow-up of a placenta left in-situ after delivery of the fetus in an abdominal pregnancy. *Ultrasound Obstet Gynecol* 1996;7(4):285-8.