International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Alam S et al. Int J Reprod Contracept Obstet Gynecol. 2023 Mar;12(3):753-756
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20230551

Case Report

Survival of a fetus after advanced abdominal pregnancy-challenging obstetric concern: a case report

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Received: 11 January 2023
Accepted: 02 February 2023

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ABSTRACT

Abdominal pregnancy is a very rare form of ectopic pregnancy with very high morbidity and mortality for both mother and fetus. A 29 years old Bangladeshi woman presented from a rural area to Chittagong medical college hospital for first gynecological evaluation after 36 weeks of amenorrhea and lower abdominal pain. An ultrasound revealed a live fetus with sub amniotic collection and possibility of ruptured uterus. Laparotomy was done and a live fetus weighing 2500 gm was delivered. Placenta was adhered with both GIT and bladder. Placenta kept in situ and injection MTX given postoperatively. After re-laparotomy for postoperative pelvic abscess and hemoperitoneum, placental tissue removed and hemostasis maintained. Both mother and fetus are discharged in good health. A live fetus can be delivered after an advanced abdominal pregnancy. Whether the placenta should be kept in situ or removed, it is controversial. After medical literature review, we propose a management in this regard. Advanced abdominal pregnancy is extremely rare diagnosis and requires a high index of suspicion. The life-threatening complication is bleeding from the detached placental site. Placenta should be kept in situ to avoid intraoperative bleeding. Placenta involution during follow-up can be revealed by ultrasound, color Doppler and β-HCG serum level decrease.

Keywords: Advanced abdominal pregnancy, Adhered placenta, Hemoperitoneum live baby

INTRODUCTION

Ectopic pregnancy represents about 1-2% of all pregnancies with 95% occurring in the fallopian tube. Abdominal (peritoneal) ectopic pregnancy defined as ectopic pregnancy occurring within the peritoneal cavity outside genital organs (uterus, tubes, ovaries) represents a very rare form of EP (1% of all EP). Of note, abdominal EP is the only form of EP that can result in a delivery of a healthy full-term baby. The incidence of abdominal pregnancy differs in various publications and ranges between 1:10,000 and 1:30,000 pregnancies. It was first reported in 1708 as an autopsy finding and a number of cases have been reported worldwide with varying presentations.[1]

Management of the placenta is controversial. There is not a common medical opinion and consensus about to leave in situ or to remove the placenta.

Abdominal pregnancy can be classified as primary or secondary. Primary abdominal pregnancy occurs when the fertilized ovum implants directly into the peritoneal cavity which is less common type. Secondary abdominal pregnancy occurs when the fertilized ovum first implants in the fallopian tube or uterus and then due to fimbrial abortion or rupture of fallopian tube or uterus, the fetus subsequently develops in the mother's abdominal cavity. Ruptured tubal ectopic pregnancies account for the majority of abdominal pregnancies. Ovarian, tubal and intraligamentary pregnancies are excluded from the definition of abdominal pregnancy.[2,3]

Abdominal pregnancy has a maternal mortality rate between 0.5 and 18% and a perinatal mortality rate between 40 and 95%.[4,5]

We present a case of an advanced abdominal pregnancy with a live fetus at 36 weeks of gestation in a woman with

abdominal pain observed at Chittagong medical college hospital in Bangladesh. The case was treated by re laparotomy and removal of the placenta with mother and newborn survival.

This manuscript was written in line with the SCARE 2020 criteria.[6]

CASE REPORT

A 29-year-old Bangladeshi woman, gravida 3 para 2 (NVD) + 0, housewife was presented from a rural area of Bangladesh to Chittagong Medical College Hospital at 36 weeks of gestation for lower abdominal pain. She was a regularly menstruating woman but could not mention her L.M.P. At her 8 weeks of amenorrhea she confirmed her pregnancy with strip test. She was in regular antenatal check up by a midwife. She felt lower abdominal pain throughout her pregnancy and usually took analgesic from midwife. On 8.8.2022 she did an ultrasonogram of pregnancy profile and the report said single live fetus of 36 weeks with sub amniotic collection and possibility of ruptured uterus could not be excluded. With this report she was referred by the midwife to this hospital. She was hospitalized and at admission obstetrical examination and trans abdominal ultrasonography revealed an alive fetus with regular fetal heart rate and adequate amount of amniotic fluid surrounded the fetus. The fetus was in transverse lie position. The patient reported severe abdominal pain. Her vital signs were stable with 120/70 mm Hg blood pressure and regular pulse with 84 beats per minute. The weight was 55 kg with a height of 1.5 m and the body mass index was 24. She was not pale. Cardiovascular and respiratory systems did not reveal any abnormalities.

Abdominal examination revealed symphysio fundal height of 34 cm, transverse lie, fetal heart rate of 142 beats per minute and no uterine contractions.

Vaginal examination revealed posteriorly located cervix which was short, soft, parous OS. There was no vaginal bleeding.

Her Hb level was 11.7 gm/dl and blood group was AB Rhesus positive. The rest of her investigations were normal. Decision for emergency caesarian section was taken on account of transverse lie.

At laparotomy the following findings were made: Abdominal pregnancy with a live female baby weighing 2.5 kilograms. The placenta was extensively adherent to segments of large bowel, omentum and bladder. The uterus was buried in the pelvis. Both tube and ovary were healthy. Other abdominal organs were normal.

There was significant bleeding from some detached portion of the placenta. Hemostasis secured by absorbable suture. Placenta kept *in situ*. Total estimated per operative bleeding was one liter.

A unit of compatible blood was transfused per operatively. Injection MTX given postoperatively. But the patient developed paralytic ileus and pelvic abscess. Her temperature was 103-degree F. Abdomen was tender. Ultrasonogram report showed hematoma in the abdominal cavity and CT scan showed large complex well demarcated abdominal mass with enhancing irregular solid tissue in lower part (suggests placental tissue) with fairly large hematoma and relatively higher attenuating fluid content. So, decision for re laparotomy taken.

Re laparotomy finding were-Pelvic abscess with placental tissue found. Abscess was drained and placental tissue removed. Hemostasis secured. The patient developed burst abdomen postoperatively and tension closure given. After healing of wound, patient discharged in a good health with a healthy baby.

Figure 1: Placenta adhered with GIT.

Figure 2 Healthy baby without any congenital anomaly.

DISCUSSION

Advanced abdominal pregnancy is classically defined as a pregnancy that has progressed beyond 20 weeks of gestation in which the fetus is growing and developing in mother's abdominal cavity or the fetus shows signs of having been in mother's abdominal cavity.[7] It is an extremely rare condition. The incidence of congenital malformation is estimated to be 30-90%.[8]

This case is being reported because no similar case has been reported so far. Abdominal pregnancy could be either primary or secondary to implantation of a primary tubal pregnancy in the peritoneal cavity. The latter is the commonest type.[1,7]

In 1942, Studdiford established three criteria for diagnosis of a primary peritoneal pregnancy: the presence of normal tubes and ovaries, no evidence of uteroplacental fistula and the presence of a pregnancy related exclusively to the peritoneal surface and early enough in gestation to eliminate the possibility of secondary implantation after primary nidation of the tube.[2,3] Watrowski et al recently expanded the classic Studdiford criteria. They reported case of an omental pregnancy invading peritoneum of the Douglas pouch. Thus, secondary peritoneal pregnancy implantation can occur not only after tubal rupture or expulsion of tubal EP but also after primary implantation at any other ectopic site.[9] In this case abdominal implantation is secondary after expulsion of a tubal EP.

Hymel et al in a review from 1965 to 2012 identified in English literature overall 31 cases of late abdominal pregnancies with average gestational age at the time of diagnosis and average time of delivery 30.4 and 33 weeks respectively.[10] He documented 23 surviving infants (88.5%) and fetal complications in 18 cases. About maternal outcomes documented in 26 cases, he reported 19 mothers (73.1%) survived. Maternal deaths were due mainly to massive bleeding, septic shock and pulmonary embolism. After 2012 other 14 cases of advanced abdominal pregnancies with newborns survival were identified.

This case demonstrated how the diagnosis of abdominal pregnancy is difficult and why a high index of suspicion is important in recognizing the condition especially in poorly resourced centers. In this case the diagnosis was missed on ultrasound. Persistent abdominal pain as in this report is the commonest symptom.[7] Diagnosis of abdominal pregnancy is often intraoperative at either laparoscopy or laparotomy. Once the condition is suspected due to fetal malpresentation, malformations or oligohydramnios then purposeful lateral projection sonography and radiography are helpful. An oxytocin stimulation test and finding of an abnormally high maternal serum alpha-fetoprotein have been proposed.[8] Other radiological studies such as magnetic resonance imaging and computed tomography scan are helpful in the later stages, unfortunately these advanced imaging technologies are not available in many low resource countries.[1] Abdominal pregnancy has traditionally been treated by laparotomy. Recent cases of minimally invasive laparoscopic and ultrasonically guided procedures have emerged in the literature in the last decade for early pregnancy presentations.[8,11]

Bleeding from the placental site can be a life-threatening complication during laparotomy. It is generally recommended to leave the placenta in situ and monitor the patient's human chorionic gonadotropin levels.[1, 12] In this case there was significant bleeding from a detached portion of the placenta which was secured and placenta kept in situ. Remaining placental tissue removed by re laparotomy.

For the newborn it is very important to rule out congenital malformations. In this case no congenital malformation was detected.

CONCLUSION

Term abdominal pregnancy is an extremely rare diagnosis. It requires a high index of suspicion. Our reported case of an advanced abdominal pregnancy showed that even at an advanced stage of gestation, the fetus may survive. Removal of ectopic placenta can be associated with a life-threatening complication such as massive bleeding, hypovolemic shock of the patient, need of per operative blood transfusions. Based on our experience, we suggest to prefer a conservative approach. After removal of the fetus, leaving the placenta in situ may be a safer option.

ACKNOWLEDGEMENTS

Author would like to acknowledge the kind comments and guidance of Dr. Samser Nahid, assistant professor, department of surgery, Chittagong medical college hospital on this case report.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Baffoe P, Fofie C, Gandau BN. Term abdominal pregnancy with healthy new born: a case report. Ghana Med J. 2011;46(2):81-3.
2. Masukume G, Sengurayi E, Muchara A, Mucheni E, Ndebele W, Ngwenya S. Full-term abdominal extrauterine pregnancy complicated by post-operative ascites with successful outcome: a case report. J Med Case Rep. 2013;7:10.
3. Poole A, Haas D, Magann EF. Early abdominal ectopic pregnancies: a systematic review of the literature. Gynecol Obstet Invest. 2012;74(4):249-60.
4. Zhang J, Li F, Sheng Q. Full-term abdominal pregnancy: a case report and review of the literature. Gynecol Obstet Invest. 2008;65(2):139-41.

5. Adesiyun AG, Audu AI. Term extrauterine pregnancy in a Nigerian mother: a complication of uterine dehiscence. Arch Gynecol Obstet. 2008;279(1):75-7.
6. Agha RA, Franchi T, Sohrabi C, Mathew G, for the SCARE Group The SCARE 2020 guideline: updating consensus surgical Case Report (SCARE) guidelines. Int J Surg. 2020;84:226-30.
7. Nkusu Nunyalulendho D, Einterz EM. Advanced abdominal pregnancy: case report and review of cases reported since 1946. Rural Remote Heal. 2008;8(4):1087.
8. Masukume G. Live births resulting from advanced abdominal extrauterine pregnancy, a review of cases reported from 2008 to 2013. Webmed Central Obstet Gynaecol. 2014;5(1).
9. Watrowski R, Lange A, Mockel J. Primary omental pregnancy with secondary implantation into posterior Cul-de-sac: laparoscopic treatment using hemostatic matrix. J Minim Invasive Gynecol. 2015;22(3):501-3.
10. Hymel JA, Hughes DS, Gehlot A, Ramseyer AM, Magann EF. Late abdominal pregnancies (≥20 weeks gestation): a review from 1965 to 2012. Gynecol Obstet Invest. 2015;80:253-8.
11. Nwobodo EI. Abdominal pregnancy: case report. Ann Afr Med. 2004;3(4):195.
12. Badria L, Amarin Z, Jaradat A, Zahawi H, Gharaibeh A, Zobia A. Full-term viable abdominal pregnancy: a case report and review. Arch Gynaecol Obstet. 2003;268(4):340-2.

Cite this article as: Alam S, Akter S. Survival of a fetus after advanced abdominal pregnancy-challenging obstetric concern: a case report. Int J Reprod Contracept Obstet Gynecol 2023;12:753-6.