



PRIMARY HEPATIC PREGNANCY

Mirunalini*, Thillai Nachiyar R and Lavanya Kumari K

Department of Obstetrics and Gynaecology, Rajah Muthiah Medical College Annamalai University,
Annamalainagar-608002, Tamil Nadu, India

ARTICLE INFO

Article History:

Received 24th April, 2017
Received in revised form 13th
May, 2017
Accepted 17th June, 2017
Published online 28th July, 2017

Key words:

Abdominal pregnancy,
liver, ectopic, placenta

Copyright © 2017 Mirunalini., Thillai Nachiyar R and Lavanya Kumari K. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

A case of G₄P₂ L₂ A₁ with 8 weeks of gestation primary hepatic pregnancy in a 39 years old female reported. An alive 50 grams of fetus with sac removed from base of liver near falciparum ligament. Bits of placenta was removed. The uterus was 8 weeks size with intact tubes. The patient made an uneventful recovery.

INTRODUCTION

Primary hepatic pregnancy is a rare condition. Intra-abdominal pregnancy is a type of ectopic pregnancy, where in the fetus grows in the abdominal cavity. The extrauterine implantation can occur in the omentum, the large vessels or even in the vital organs. Abdominal pregnancies account for 0.1 % of all pregnancies and up to 1.4% of ectopic pregnancies.⁴ These pregnancies can go undetected until an advanced gestational age and often result in massive hemorrhage.⁷ Rates of maternal mortality range between 2 and 30%. The site of implantation and availability of vascular supply determine the possibility of fetal survival. Risk factors associated with abdominal pregnancy include tubal damage, pelvic inflammatory disease, endometriosis, assisted reproductive techniques and multiparty. Clinical history and physical examination alone may be insufficient to make a preoperative diagnosis

Case Report

A 39 yrs old female G₄P₂ L₂ A₁ admitted in RMMCH with 8 weeks of amenorrhea with H/O previous 2 LSCS with H/O MTPill taken followed she had bleeding P/V for 4 days and had upper abdominal pain for past 45 days. On examination her abdomen was soft, warm, tenderness felt at epigastric region, USG showed an Ectopic gestation of 11 Weeks + 4 days. Abdominal pregnancy (? Pericholecystic region), Fetal movements and cardiac activity were present. Free fluid was present in the peritoneal cavity and liver function test was

normal, patient counselled and opted for emergency laparotomy.



USG Picture



Intra operative picture

Intra operatively uterus and bilateral fallopian tubes were found to be normal. No rent was found at the previous uterine scar site. 200ml of haemoperitoneum was found. A 10 weeks size fetus with sac and placenta felt in base of liver near falciparum ligament. An alive fetus and bits of placenta was removed from the same site, Oozing was present in pericholicystic region, sutured with 2-0 vicryl, after achieving perfect haemostasis abdomen closed in layers. One unit blood was transfused intra operatively. Postoperative period was uneventful.

DISCUSSION

Abdominal pregnancy occurs either as a result of tubal abortion or rupture (secondary abdominal pregnancy) or rarely as a result of primary peritoneal implantation (primary abdominal pregnancy). Primary peritoneal implantation is rare. The mortality of abdominal pregnancy is 7.7 times higher than that of tubal pregnancy and 90 times greater than that of intrauterine pregnancy.

Abdominal pain is the most frequent symptom. Rarely, symptoms may relate to placental site attachment, including attachment to the bowel or bladder obstruction.

Ordinarily, the location of an abdominal pregnancy is pelvic, but very rarely it may be implanted in the upper abdomen (especially on the liver). In most cases, the attachment site of the placenta is on the lower surface of the right lobe of the liver. Kirby 1969⁶ described liver as a placental site here we report a case of ectopic pregnancy implanted on the lower surface of the right liver lobe.

Studdiford (1942)¹⁰ suggested four criteria for the diagnosis of primary abdominal pregnancy. (1) Normal tubes and ovaries with no evidence of recent or remote injury. (2) Absence of any evidence of uteroplacental fistula. (3) Presence of pregnancy related exclusively to the peritoneal surface. (4) The pregnancy should be recent enough to eliminate the possibility of secondary implantation following primary nidation in tubes.

All four criteria for such a diagnosis were fulfilled in our patient. In all cases of hepatic pregnancy placental attachment appears to have been to the inferior surface of the right lobe of the liver as in our case. Some patients may present with dyspeptic symptoms (Luwuliza Kirunda, 1978)⁸ due to pressure on gall bladder or duodenum. If the patient had been bleeding 1 week or less one could expect to find decidua without chorionic villi in 70.7%. Arias Stella (1954)² described atypical endometrial changes in ectopic pregnancy.

Removal of the placenta in an abdominal pregnancy always carries the risk of haemorrhage. Moir & Myerscough (1971)⁹ strongly advise against any attempt at local removal of placenta. They recommend closing the abdomen and leaving the placenta to take care of itself. Unfortunately, the placenta, if left in the abdominal cavity, commonly causes complications in the form of infection, abscesses, adhesions, intestinal obstruction, and wound dehiscence. Pritchard & Macdonald (1976)³ found evidence of consumptive coagulopathy, including overt hypofibrinogenaemia 2 months following laparotomy for delivery of the fetus. Methotrexate has been used in an attempt to inactivate the trophoblast rapidly when the placenta has been left in position (Hreshchyschyn *et al.*, 1965)⁵; and it has been suggested that it be used before operation if the baby is known to be dead. Sonography 2 is the most effective method for diagnosing an

abdominal pregnancy include fetus being seen outside the uterine cavity, absence of the uterine wall between bladder and fetal parts, oligohydramnios, fetal parts located close to the maternal abdominal wall, and abnormal location of placenta outside the uterine cavity¹. The role of MRI is to locate the placenta and identify its adherence to any vital organs, including the liver and spleen. In this case, MRI not only helped confirm the diagnosis, but it delineated the exact anatomical localization of fetal parts and placental tissue as well as the adhesions to the uterus. This information proved vital in preoperative planning. The information on the location, state of viability of the placenta and blood supply will influence management and aid in planning surgery¹¹. MRI has many advantages over ultrasound as bone, gas-filled structures and maternal obesity provides no hindrance to imaging.

Preoperative angiograms can be useful in locating all sources of vascular supply to the placenta and if possible to embolize vessels difficult to ligate operatively. If the placenta is not removed during laparotomy, postoperative embolization of feeding arteries can be done to control hemorrhage from adherent placenta.

The management of abdominal pregnancy depends on fetal viability, presence of fetal congenital abnormalities, gestational age, maternal complications, placental location and adherence. Usually surgical intervention is necessary regardless of fetal viability. The management of the placenta is still under debate. Total removal is preferable with ligation of blood supply or preoperative embolization. Partial removal due to adherence may result in massive hemorrhage and shock. In cases of adherence the placenta can be left in situ, ligating the cord as close to the placenta as possible. The placenta usually ceases to function after 4 months. Postoperative angiographic embolization of feeder vessels is possible and placental involution can be followed by serial hCG¹. Some authors advocate preoperative systemic methotrexate in the management of abdominal pregnancy.

CONCLUSION

Management approaches reported in the literature vary from conservative management to cases of wedge resection and right hepatic lobectomy. Hepatic ectopic pregnancies often require more treatment attempts than ectopic pregnancies at other sites. The initial treatment for all but one of the reported ectopic pregnancies was surgical, resulting in an average blood loss of 2400 mL, with six of the 13 patients receiving a transfusion at the time of laparotomy. Because of persistent bleeding, staged surgery was used, with packs left in place and then removed the following day. Another patient had an omental graft owing to persistent bleeding from the site of placental attachment on the liver.

In conclusion, for patients with increasing serum hCG levels and no pregnancy identified in the uterus or pelvis, a thorough examination of the entire pelvis and abdomen should be carried out. A high index of suspicion is vital for diagnosing hepatic ectopic pregnancy and reducing maternal mortality.

Unless the placenta can be easily tied off or removed, it may be preferable to leave it in place and allow for a natural regression. This process may take several months and can be monitored by clinical examination, checking human chorionic gonadotropin levels and by ultrasound scanning (in particular using doppler ultrasonography). Use of methotrexate to accelerate placental regression is controversial as the large

amount of necrotic tissue is a potential site for infection, mifepristone has also be used to promote placental regression. Placental vessels have also been blocked by angiographic embolization. Complications of leaving the placenta can include residual bleeding, infection, bowel obstruction, pre-eclampsia (which may all necessitate further surgery) and failure to breast feed due to placental hormones.

References

1. Allibone, GW, Fagan CJ, Porter SC. The sonographic features of intra-abdominal pregnancy. *Journal of Clinical Ultrasound*. 1981 9(7): 383-387.
2. Arias Stella, J. (1954). Atypical endometrial change associated with presence of chorionic tissue. *Archives of Pathology*, 58, 112.
3. Pritchard, J.A. & Macdonald, P.C. (1976). In J.W. Williams Obstetrics p. 448. Appleton Century Crofts: New York.
4. Bertand G, Le R, Simard-Emond L, *et al*. Imaging in the management of abdominal pregnancy: A case report and review of the literature. *JOGC*.2009: 57-62.
5. Hreshchshyn, M.M., Naples, J.D. JR. & Randall, C.L. (1965). Amethopterin in abdominal pregnancy. *American Journal of Obstetrics and Gynecology*, 93, 286.
6. Kirby, M.G. (1969). Primary hepatic pregnancy. *British Medical Journal*, 1, 296.
7. Kun KY, Wong PY, Ho MW, *et al*. Abdominal pregnancy presenting as missed abortion at 16 weeks' gestation. *HKMJ* 2000; 6:425-427.
8. Luwuliza-Kirunda, J.M.M. (1978). Primary hepatic pregnancy. *British Journal of Obstetrics and Gynaecology*, 85, 311.
9. Moir, J.C. & Myerscough, P.P. (1971). In J.M. Munro Kerr's Operative Obstetrics. Bailliere, Tindall & Cassell: London. p.758.
10. Studdiford, W.D. (1942). Primary peritoneal pregnancy. *American Journal of Obstetrics and Gynecology*, 44, 487.
11. Tang HC, Kumar G, Ramli NM. A viable secondary intra abdominal pregnancy resulting from rupture of uterine scar. *The Brit J Radiol*. 2007; 80: e 134 -e 136.
