Case Report

Early Abdominal Pregnancy Diagnosis and Management- A Case Report

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Abstract

Abdominal pregnancy is a rare type of ectopic pregnancy associated with a high mortality rate. Abdominal pregnancies constitute approximately1% of all ectopic pregnancies. Mortality rates are 7.7 times higher than in tubal pregnancy, and 89.8 times higher than in pregnancy. Because of the rarity and associated mortality of abdominal pregnancies, early diagnosis and early recourse to intervention is paramount. Clinical features vary based on site and gestation at presentation. Ultrasound remains the primary means of diagnosis. Surgical intervention is the ideal best option for the treatment. We reported this case to study, diagnosis, management and outcome of abdominal pregnancy.

Keywords: Abdominal ectopic pregnancy, Laparotomy, Ultrasound.

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Background

Abdominal pregnancy is a rare form of ectopic pregnancy with high morbidity and mortality. There are a limited number of case reports of abdominal ectopic pregnancies. An abdominal ectopic pregnancy is a pregnancy that occurs outside of the uterus and instead in the abdominal cavity. Common forms of placental implantation in abdominal pregnancies include attachment on reproductive organs with subsequent rupture into the peritoneal cavity, as well as direct attachment to uterine serosa, omentum, bowel and mesentery. Abdominal ectopic pregnancies increase the risk of fatal intraperitoneal hemorrhage. Therefore, it is important to diagnose and effectively manage this rare type of pregnancy in order to reduce morbidity and mortality.[1] Abdominal pregnancy is an ectopic pregnancy where the fetus and placenta is implanted in the peritoneal cavity. Implantation in the ovary, tubes and broad ligaments are not considered as abdominal pregnancy by several experts. Multiparity, tubal damage due to pelvic inflammatory disease and endometriosis and previous tubal surgery are risk factors just like for any other ectopic pregnancy. Smoking is also a significant risk factor. In more than half of the cases, no obvious risk factor might be detected.[2] The recent use of progesterone only pills and intrauterine device with history of surgery and sexually transmitted disease increases the risk of ectopic pregnancy.[3]

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Case Report

A 26 year old lady with no past significant medical or surgical history, para 1, delivered by caesarean section 4 years back and history of 1 spontaneous abortion 2 years back, presented to the Gynae OPD of Ad-din Sakina Women's Medical College Hospital, Pulerhut, Jashore with the C/O- spotting and bleeding per vagina associated with severe abdominal pain for 1 day. Her menstrual period was regular and her last menstrual period was on 20/12/24. Now she is 6 weeks pregnant. She performed UPT at home and became positive. Upon arrival in hospital, she was conscious and oriented but she was severely anemic, her temperature was 36.9, respiratory rate was 14/min, heart rate was 100b/min, blood pressure was 90/60 mm of hg.

Emergency ultrasound was done and revealed huge intra peritoneal fluid with complex lesion in

left para umbilical region. Blood biochemistry and hematology report showed hemoglobin 10.5 gm/dl, WBC- TC was 9.99×10⁹/L, platelet count was 83x 10⁹/L, blood group was B positive, blood urea, serum electrolyte and coagulation profile were within normal limits.

After admission, she was counselled about the diagnosis and plan of management. All the possible complications were discussed with the patient. Written consent was taken and the patient was prepared for emergency surgery. A laparotomy was planned. The general surgeon kept informed. Adequate blood and blood products were kept ready.

A laparotomy with midline vertical incision was performed on 4th February 2024 at 4.15 pm. After opening the abdomen huge blood was found in the peritoneal cavity which was sucked out, peritoneal washing was given with normal saline. Uterus, both fallopian tubes and ovaries found normal. Ectopic sac was implanted on the side of the transverse colon which was dissected carefully. The omentum had hemorrhagic areas which were secured with additional sutures and cautery. The bowel, others intra-abdominal organs, ureters were all thoroughly examined; no damage or bleeding anywhere was detected, thorough warm saline wash given. An intraperitoneal drain was left and abdomen closed in layers. Intraoperative blood loss was estimated to be around 700 ml. Sac was sent for histopathology.

Post operatively she had a smooth, uneventful recovery. An ultrasound was repeated on the 3rd day which showed a normal pelvi-abdominal cavity and no intraperitoneal collection. She was discharged home on the fourth day with a follow up appointment in 4 weeks with histopathology report.

Photographs showing Ectopic scar adherent to the side wall of the transverse colon.

Discussion

Early abdominal pregnancy is one that presents at or before 20 weeks of gestation. Abdominal pregnancy can also be classified as primary or secondary depending on the implantation site.

PRIMARY ABDOMINAL PREGNANCY: This form is exceptional, the fertilized ovum implants directly on the peritoneal surface. The diagnosis is based on the following criteria defined by studdiford: normal fallopian tube and ovaries, absence of retroperitoneal fistula, and pregnancy that is attached only to the peritoneal surface and is diagnosed early (less than 12 weeks of amenorrhea), excluding the possibility of secondary abdominal pregnancy. The implantation site is variable, it can be pelvic (rectouterine pouch, fundus or posterior side of the uterus), abdominal (diaphragm, liver, spleen, omentum) or even retroperitoneal.

SECONDARY ABDOMINAL PREGNANCY: Is the most common form. It can result from tubal rupture or from a tubo-abdominal abortion .It can also be a consequence of an intrauterine pregnancy after a rupture of a hysterotomy scar, or a uterine perforation or a rupture of rudimentary horn.[4]

Abdominal pregnancy can be classified as early or late based on the gestational age at which they present. The clinical presentation is extremely variable and the diagnosis of early abdominal ectopic pregnancy (EAP) is complex. As there are no pathognomonic symptoms of abdominal pregnancy that distinguish it from tubal pregnancy, it requires a high index of suspicion. It is not uncommon to diagnose EAP for the first time at laparotomy or laparoscopy performed for tubal ectopic pregnancy, and on occasion more than one laparotomy/laparoscopy may be required before the diagnosis is eventually made. A suboptimal increase in serial human chorionic gonadotrophin (b-hCG) titres is not sufficient to make the diagnosis of any ectopic pregnancy, including EAP. The tool of choice for diagnosis is ultrasound, but distinguishing an EAP from other variants of ectopic pregnancy remains difficult. Only 50% accuracy can be expected for the diagnosis of EAP when ultrasound is used along with clinical evaluation. Ultrasound features to aid diagnosis of EAP were suggested by Allibone et al. These include, a) demonstration of a fetus in a gestational sac outside the uterus, or the depiction of an abdominal or pelvic mass identifiable as the uterus separate from the fetus, b) failure to see a uterine wall between the fetus and urinary bladder, c) recognition of a close approximation of the fetus to the material abdominal wall and, d) localization of the placenta outside the confines of the uterine cavity. As with all types of ectopic pregnancy, medical management of abdominal pregnancy has been reported. Agents used to treat these ectopic pregnancies include methotrexate (systemic and local), local instillation of potassium chloride, hyperosmolar glucose, prostaglandins, danazol, etoposide and mifepristone. Medical management is commonly used where potential life-threatening bleeding is anticipated, such as EAP of the liver and spleen. Even where medical management is used, it is important that patients are kept under surveillance as it is not uncommon for them to still require surgery because of hemorrhage. Angiographic arterial embolization can be used as first line treatment of EAP with the aim of avoiding surgery. Embolization of feeding vessels preoperatively will facilitate complete removal of an abdominal pregnancy.[5] Current concept on management of abdominal pregnancy support immediate active surgical intervention with termination of the pregnancy if diagnosed before 24 weeks gestation. In patients who present after 24 weeks, the appropriateness of conservative management is debatable. There is need to assess each individual case and adopt the most appropriate method with a view to limiting materno-foetal morbidity and mortality. A conservative approach requires

close surveillance of the patient and regular monitoring using Ultrasonography. The patient should be admitted into hospital where blood bank facilities and resources needed for rapid surgical intervention are obtainable. Intra-operative management of the placenta poses another dilemma for the clinician. Although removal of the placenta offers a better prognosis, this should not be attempted if there is any risk of massive hemorrhage with a fatal outcome. Placentas left in-situ usually regress gradually and are monitored with serial serum β-hCG estimation and Ultrasonography. The prophylactic use of methotrexate in placenta management is no longer advocated by some clinicians. In their view, the necrosed placental tissue is a potent culture medium with increased risk of serious intraperitoneal infection.[6] Abdominal pregnancy with live fetus is an extremely rare condition and requires a high index of suspicion.[7] At early gestations, it can be challenging to render the diagnosis, and it can be misdiagnosed as a tubal ectopic pregnancy.[8]

Conclusion

EAP is rare, and successful management depends on a high index of suspicion. While ultrasound and serial human chorionic gonadotrophin may help in the diagnosis, there is no single diagnostic tool available. At laparoscopy it is important that if an ectopic pregnancy is not visualized in the usual locations, then the entire abdominal cavity is inspected to include all abdominal organs. If the diagnosis is still not confirmed then MRI or intra-operative ultrasound may assist in diagnosis. Given the benefits of operative laparoscopy and increasing use of this modality for treatment, an initial laparoscopic approach may be appropriate to evaluate the size of the EAP, the organs to which it is attached relative vascularity, to decide further management. Teamwork, a multidisciplinary approach and expert opinion cannot be overemphasized to ensure successful management of the cases.

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Ethical approval: Ethical clearance was obtained from the patient herself by written and informed consent as well from Obstetrics and Gynecology department.

Conflict of interest: The authors declare no conflict of interest.

Highlights

- The clinical presentation of early abdominal pregnancy is similar to that of tubal ectopic pregnancy in the majority of cases.
- Surgical laparoscopy must be the first choice in management of early abdominal pregnancy.
- Medical treatment should be reserved when a surgical intervention is deemed to be potentially severely hemorrhagic.

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