

Abdominal Ectopic Pregnancy: An Important Cause of Haemoperitoneum and Shock

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Abstract

Abdominal pregnancy is rare and is usually diagnosed late. It has a higher mortality rate than other ectopic gestations. Delayed diagnosis can lead to catastrophic hemorrhage. This report describes an abdominal ectopic pregnancy, revealed by a massive haemoperitoneum and hemorrhagic shock in a young woman.

Keywords Abdominal pregnancy; Hemorrhagic shock; Haemoperitoneum; Emergency surgery

Introduction

Abdominal pregnancy is a rare entity, defined as the presence of an ectopic pregnancy implanted within the peritoneal cavity, outside the fallopian tube and ovary and not located in the broad ligament [1]. This diagnosis remains very challenging, as it can lead to hemorrhagic shock and death if not diagnosed and treated early. We report herein a case of an abdominal pregnancy in a young woman revealed by haemoperitoneum with a hemorrhagic shock.

Case Report

An 18-year-old, unmarried female patient admitted to emergency department for acute lower abdominal pain, vomiting, profuse sweating and shock. She didn't have any history of amenorrhea. She also didn't report any history of contraceptive use, of smoking or of pelvic inflammation. Her previous menstrual cycle was regular. On physical examination, the patient was pale with a pulse of 144/min, a blood pressure (BP) of 80/40 mmHg and with a left iliac fossa tenderness. Per vaginal examination showed normal uterine size with no cervical motion tenderness. Beta-human chorionic gonadotropin (β -hCG) was positive, hemoglobin (Hb) was 6.2 g/dL and White Blood Cell Count was 10,800/ mm³.

Ultrasonography showed a haemoperitoneum with an abdominal pregnancy of 16 weeks, implanted on the sigmoid colic region. No gestational sac was seen inside the uterus. Despite reanimation and transfusion with blood products, the pulse rate was 130/min and the BP was 70/60 mmHg. Because of the clinical features of shock, laparotomy was performed under general anesthesia. On laparotomy exploration, about 1.5 liters of free blood was observed in the peritoneal cavity and the intra abdominal pregnancy was confirmed. The detached placenta was seen implanted over the sigmoid colic region, leading to the haemoperitoneum (figure 1). The fetus and the placenta were removed (figure 2). The uterus was normal in size and both fallopian tubes were normal. Complete hemostasis was achieved before abdominal wall closure. The postoperative course was uneventful. The patient was discharged on the 4th postoperative day. The Hb rate at discharge was of 10.3 g/dL. Contraception advice was given. The patient was doing well at 6-week follow-up.



Figure 1: Intraoperative view showing the haemoperitoneum



Figure 2: Specimen resection

Discussion

Described for the first time in 1942, by Studdiford [2], abdominal pregnancy is a rare form of ectopic pregnancy. It is defined as implantation of the fertilized egg on the pelvic peritoneum [1]. Abdominal pregnancies result from pregnancy related exclusively to the peritoneal surface. The tubes and ovaries are normal and there is no evidence of an utero-peritoneal fistula [2]. Its incidence is reported to be less than 10/1000 ectopic pregnancies [3]. In abdominal pregnancy, the fetus continues to grow following attachment to an abdominal structure. It might attach to all organs such as uterus, broad ligaments, liver, spleen, or intestines [4].

Many factors might cause ectopic pregnancy such as a previous history of ectopic pregnancy, pelvic infection and a prior tubal surgery [4]. Some types of contraception, such as progestogen-only contraception and the intrauterine contraceptive device are also associated with a high incidence of ectopic pregnancy when there is contraceptive failure [5]. Our patient had no history of pelvic inflammatory disease or pelvic surgery.

The classic symptoms of ectopic pregnancy are secondary amenorrhea, abdominal pain and vaginal hemorrhage, with a clinical picture of varying acuteness [6]. In abdominal pregnancy, the most frequent complaint is abdominal pain. If trophoblast erodes into arterioles, it can lead to massive intraperitoneal hemorrhage [7]. Having a high index of suspicion is helpful for early diagnosis especially if risk factors are present. Diagnosis is determined through serum β -hCG levels and ultrasonography techniques [2,4]. Medical treatment of ectopic pregnancy is useful [4,8]. Many different agents have been used to treat ectopic pregnancies including systemic and local methotrexate, local potassium chloride, hyperosmolar glucose, prostaglandins, danazol, and etoposide. The use of methotrexate for treatment of early unruptured ectopic pregnancy was reported to be safe and effective [8,9]. Recently, some authors use adjuvant systemic methotrexate after surgery for abdominal pregnancy without surgical resection of the implantation site [10]. The preferred surgical method for treatment of ectopic pregnancy is laparoscopy [11,12].

Laparotomy is indicated in the case of hemodynamic instability as it allows rapid access to pelvic structures. Our patient had an urgent laparotomy within 30 min of her arrival and required four units of cross-matched blood transfusion. Factors such as maternal hemodynamic status, fetal congenital abnormality, fetal viability, gestational age at presentation and the availability of neonatal facilities should be considered in management of ectopic pregnancy [4,11]. Our patient had a life-threatening condition associated with haemoperitoneum. In this case, emergency laparotomy is usually required. Gaining adequate exposure and obtaining hemostasis are the key rules. Maternal mortality remains high and can reach 20% [6]. Therefore, diagnostic procedures merely serve as an excuse to speed a patient into surgery.

Conclusion

Abdominal pregnancy is rare and should always be considered in the differential diagnosis of abdominal pain with shock occurring in women of reproductive age. Early diagnosis, rapid procedures and effective management may decrease mortality.

Competing interest

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

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