Case Report

Unusual Abdominal Ectopic Pregnancy Implantation in the Vesicouterine Pouch: A Case Report

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Abstract

Background: Primary abdominal ectopic pregnancy is a very rare condition that occurs when the gestational sac is implanted directly into the abdominal peritoneum. In many cases it is difficult to have an exact diagnosis before explorative and therapeutic laparotomy or laparoscopic surgery and most of them are diagnosed during surgery. It can be a life threatening condition with high morbidity due to misdiagnosis or mismanagement.

Cases Report: A 36 -year-old Iranian woman was admitted to Mahdieh hospital emergency department of shahid Beheshti medical science university (Tehran, Iran) with vaginal spotting and abdominal right lower quadrant pain with a background history of 6 weeks' amenorrhea and a significant beta-human chorionic gonadotropin of 26660 IU/L. Subsequent transvaginal sonography revealed paraovarian fluid and 20×23 hyperheteroechoic right adnexal mass with peripheral vascularity indicating probable ectopic pregnancy. Following that, she underwent diagnostic and therapeutic laparotomy. It showed 400 cc blood and 50 cc clot in vesicouterine pouch that were suctioned. There was no evidence of right adnexal ectopic pregnancy however a resemblance of trophoblastic tissue was located on the wall of uterovesical pouch on the omentum.

Conclusion: We conclude that emergency laparotomy or laparoscopic surgery should be done to prevent occurrence of uncontrollable bleeding. Also utilizing MRI can be beneficial for exact detection the site of ectopic pregnancy before surgery which can be useful for perioperative planning and management of this condition.

Keywords: Pregnancy ,Vesicouterian pouch ,Explorative surgery ,MRI

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Introduction

Ectopic pregnancy is a complication of pregnancy in which the blastocyst implants outside the endometrial cavity of uterus, most commonly in fallopian tube. It occurs in 1%-2% of all pregnancies around the world in average. Classic signs and symptoms of ectopic pregnancy include amenorrhea, abdominal pain and vaginal bleeding may not be seen in most of cases and some of them may present with non- specific symptoms such as hemodynamic shock and a history of unawareness about ongoing pregnancy. Ectopic pregnancies can be life threatening if not diagnosed and managed timely. Risk factors of ectopic pregnancy include pelvic inflammatory disease, smoking, prior tubal surgery, using assisted reproductive technology

and history of ectopic pregnancy. Here we have reported a rare presentation of primary ectopic pregnancy in the uterovesical pouch and its management.

Case Report

A 36 -year-old woman was admitted to emergency department of Mahdieh hospital with vaginal spotting and persistent abdominal right lower quadrant and suprapubic pain. The patient had amenorrhea for the past 6 weeks and her pregnancy was confirmed based on a beta-human chorionic gonadotropin of 26660 IU/L. She had a history of 5 pregnancies, 4 cesarean section and appendectomy 15 years ago. Her parity was 5 and living child was 2. The main cause of her first cesarean section was for hydrops fetalis in 28th week of pregnancy. Also she had a history of twin intra uterine fetal death in 24th week of pregnancy. Her recent pregnancy happened while she was using intrauterine device as a contraception method. On her presentation to emergency ward, the patient blood pressure was 110/60 mmHg with a pulse rate 60 bpm, a respiratory rate of 16 breaths per minute and a temperature of 37.1°C. Abdominal examination showed right lower quadrant tenderness rebound tenderness without guarding. Her primary β-HCG level at the time of admission was 26660 IU/L. This level was measured twice during the first week after surgery and revealed a steady decrease to 220 IU/L. Her complete blood count at the emergency department showed a hematocrit of 42%, a hemoglobin of 13.7g/L, a white cell count of 6.6×10^9/L and a positive AB blood group. Renal and liver function tests were normal. The patient trans vaginal sonography reported no evidence of gestational sac in the uterus but revealed para ovarian fluid, 20×23 hyperheteroechoic right adnexal mass with peripheral vascularity and heteroechoic ring without apparent vascularity beyond it indicating ectopic pregnancy. Arterial and venous intraovarian blood flow was normal and no evidence of partial ovarian torsion was detected. Some free fluid was seen in anterior and posterior coledoc sac and right para ovarian. Diagnostic and therapeutic laparotomy demonstrated normal fallopian tubes and ovaries without products of conception (Figure 2). An apparent mass was detected between bladder and anterior part of fundus which was implanted on the omentum in right side and had moderate active bleeding (Figure 1).

During explorative laparotomy anatomical abdominal layers were opened. About 400^{cc} blood and 50^{cc} clot were suctioned. Implanted mass was removed and hemostasis was stablished. The sample of embedded

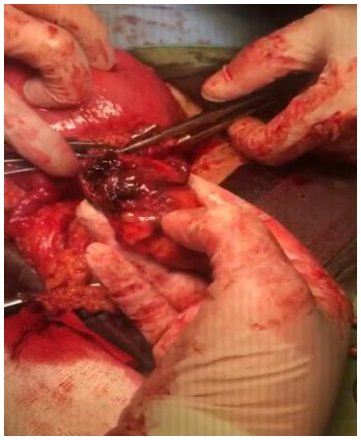

Figure 1. Abdominal ectopic pregnancy mass.

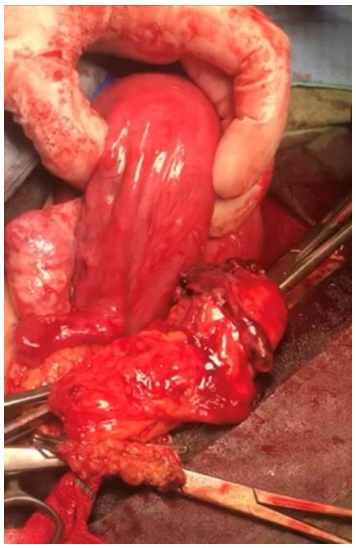

Figure 2. Intact right ovary and fallopian tube.

mass was sent for histopathology examination and peritoneum closed.

Histopathological findings of tissue sample revealed fibrofatty tissue with presence of chorionic villi that is compatible with ectopic pregnancy. This data was in keeping with a primary extra uterine gestation in the uterovesical pouch. Serial B-HCG showed a constantly decrease from day 1 pre operation of 26660 IU/L to <200 IU/L in day 8 post surgery. Weekly B-HCG level checking was recommended till B-HCG level became < 5 IU/L. After 3 weeks follow up, our aimed level was

obtained.

Discussion

Ectopic pregnancy occurs when a developing embryo implants at a site other than endometrium of uterine cavity, most commonly within the fallopian tube. Although the incidence of ectopic pregnancy is estimated to be approximately 2% of all pregnancies, it is one of the most common gynecologic emergencies encountered by community physicians but associated maternal mortality has significantly declined over the decades due to earlier diagnosis and treatment[1]. Risk factors for ectopic pregnancy include age older than 35 years, pelvic inflammatory disease, endometriosis, smoking, using assisted reproductive methods, history of inflammation of fallopian tubes or abnormally shaped fallopian tubes, have an ectopic pregnancy in past, getting pregnant while using intra uterine device, have scarring from pelvic surgery. However, one- half of women with diagnosed ectopic pregnancy have no identified risk factors[2]. Our patient had three of nine above risk factors include age older than 35 years old, history of scarring from previous cesarean section and getting pregnant while using intrauterine device (IUD). The majority of ectopic pregnancies (95%) occur in ampullary, infundibular and isthmic segments of fallopian tube. Ampullary portion of fallopian tube is the most common site for ectopic gestation and accounts about 70% of such cases. Fewer than 5% of ectopic pregnancies happen in the interstitial segment of the fallopian tube, cervix, anterior lower uterine segment in a cesarean delivery scar, ovary or peritoneal cavity. Less than 0.9% of ectopic pregnancies are peritoneal[3]. Findings of our explorative and therapeutic laparotomy under the general anesthesia confirmed the primary ectopic pregnancy was implanted in to the peritoneum of uterovesical pouch which bilateral adnexa and ovaries had no visual changes. The pathophysiology of intraperitoneal ectopic pregnancy is not exactly clear but probable mechanism in this case can be scarring from previous appendectomy and cesarean section which provided an unusual site for embryo implantation. Utilizing MRI for exactly detection the site of ectopic pregnancy in such cases that have very high level of β-HCG without gestational sac in the uterus based on sonography report, is recommended. Emergency laparotomy or laparoscopic surgery should be done to prevent occurrence of uncontrollable bleeding. Weekly β-HCG level should be checked routinely until β-HCG<5 IU/L.

Conclusion

Abdominal ectopic pregnancy is a rare condition that can be potentially life threatening because of its probable hemorrhagic complications.

Emergency laparotomy or laparoscopic surgery should be done to prevent occurrence of uncontrollable bleeding . Exact detection the site of abdominal implanted embryo in suspicion of abdominal ectopic pregnancy can be a beneficial guidance for perioperative planing and management of this condition Hence application of an accurate radiologic modality such as MRI is helpful

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