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Broad Ligament Abdominal Pregnancy: An Unusual Ectopic

Dr. Tejas Gopalkrishnan

Abstract: ***Introduction: Broad ligament abdominal pregnancy is a rare type of ectopic. This report presents a case of suspected secondary abdominal ectopic in broad ligament. The patient came to a tertiary care center in the state of Gujarat, west India. She presented with pallor, weakness and abdominal pain. Transvaginal sonography confirmed the diagnosis of abdominal pregnancy and the case was managed with laparotomy. Patient had an uneventful recovery period. The broad ligament ectopic pregnancy has high fetomaternal morbidity and requires an established protocol for management in the emergency.***

Keywords: abdominal pregnancy, broad ligament ectopic

1. Introduction

Ectopic pregnancy is defined as pregnancy outside the uterine endometrium [1]. Majority of ectopic implantations occur in the fallopian tubes and rest occur in other sites such as cervix, ovary, cesarean scar and abdominal [1]. Abdominal ectopic is a rare type of ectopic pregnancy with reported incidence of 1 in 10000 pregnancies [2]. The report reveals a case of suspected secondary abdominal broad ligament ectopic pregnancy managed with laparotomy.

2. Case Report

A 26 year old female, 2nd gravida [para 1, aborta 1] with 1 living issue, was referred to our hospital from a peripheral hospital with 14 weeks amenorrhea with a USG report suggestive of ruptured right tubal ectopic pregnancy. She was afebrile with a pulse of 140/min and blood pressure of 94/64 mmhg. Her urine pregnancy test was positive. On per abdominal examination, there was tenderness in the lower abdominal region with no mass palpable per abdomen. On per speculum examination, the cervix was multiparous and directed towards left and per vaginal examination revealed a cystic mass in the right fornix of approximately 4 cm in largest diameter, tender and displacing the uterus towards left. An urgent transvaginal sonography revealed a fetus outside the uterine cavity, in the right adnexa, of 13 weeks 2 days by crown rump length, with fetal cardiac activity. Amniotic cavity was intact with oligohydramnios. Uterine cavity was empty. Left adnexa was normal. There was massive hemoperitoneum noted. Her hemoglobin was 7 gm % and the rest of the investigations were within normal limits. She was taken up for an emergency laparotomy. Intraoperatively, there was hemoperitoneum which was drained. The uterus was normal size with a fetus of approximately 8 cm crown rump length in the right broad ligament covered with an intact amniotic sac. The fetus with the amniotic sac was delivered. The placenta delivered spontaneously with the fetus without undue hemorrhage. Fetus showed herniation of tissue from the cervical region of spinal cord, suggestive of suspected encephalocele. Placental tissue was found to be adherent to the right fallopian tube. Right salpingectomy was done. Hemostasis was achieved and the abdomen was closed. Patient required 2 units of packed red cells to cover the blood loss. She had an uneventful postoperative stay and was discharged on 5th post op day. Suture removed on 10th post op day. The wound site was healthy.

Figure 1: Fetus with suspected encephalocele

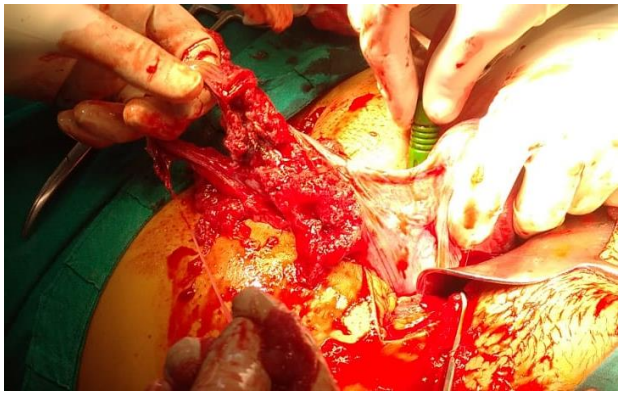

Figure 2: Ruptured right fallopian tube

3. Discussion

Abdominal pregnancies are classified as primary or secondary depending on its implantation site. Secondary abdominal pregnancies occur when the nidus of conception is expelled off the female reproductive organ to implant in the abdominal cavity. Such classification however does not affect the management of the pregnancy. [3]

Studdiford et al described the primary ectopic with criteria that the tubes and ovaries are normal, with absence of any evidence of a uteroperitoneal fistula, and presence of a pregnancy related exclusively to the peritoneal surface. The pregnancy should be early enough to eliminate the

possibility of secondary implantation from primary tubal ectopic. [4]

Almost all patients of abdominal ectopic have persistent non labor abdominal or suprapubic pain and bleeding per vaginum in almost all cases and nausea and vomiting in more than two - thirds. Other symptoms include painful fetal movements, general malaise and altered bowel movements. Clinical examination would reveal abdominal tenderness and a displaced uterine cervix [5]

Lab investigations play a minimal role in diagnosis. Serum beta HCG helps in diagnosing pregnancy and has a prognostic value. Levels more than 2000 mIU/ml with empty uterus is highly suspicious of ectopic [6]. Decreasing or slowly rising levels suggest either ectopic or abortion [7]. Newer experimental markers include Activin AB, ADAM - 12, micro RNA 378d and PAPPA. Activin AB is found to have higher sensitivity and specificity than beta HCG for diagnosis of ectopic pregnancy [8].
Transvaginal sonography helps to visualize abdominal ectopic but is only 50% accurate to diagnose ectopic pregnancy. The criteria to diagnose abdominal ectopic are demonstration of fetus and gestational sac outside uterus, failure to see abdominal wall between fetus and urinary bladder, localisation of fetus close to maternal abdominal wall and identification of placenta outside uterine cavity [9]. MRI can help in diagnosis of ectopic pregnancy when ultrasonography proves inadequate. Contrast enhanced MRI helps assess organ involvement. [3]

Abdominal ectopic is associated with very many fetal anomalies. This makes continuation of the pregnancy all the more controversial. The precarious blood supply leads to oligohydramnios which affects the fetus due to compression leading to flattened head and cranial anatomy. Further there could be limb defects and central nervous system anomalies. The associated fetal abnormalities are torticollis, flattened head, facial cranial asymmetry, thorax malformations, limb deformities, joint deformities, cns malformations. [10], [11]

Management of broad ligament ectopic could be medical or surgical however Zinger et al have noted the persistence of abdominal ectopic pregnancy even after the administration of methotrexate. [12] Hence the weight of the management of broad ligament ectopic lies on surgical management only. This could be through laparotomy or laparoscopy. Open approach is preferred for hemodynamically unstable patients [13]. However case reports with laparoscopically managed cases of abdominal ectopic are not uncommon. [14] [15]. The point of contention is whether to remove the placenta or let it lie in situ. The complete removal of placenta is a dictum in abdominal pregnancy if safely possible [5].

4. Conclusion

Broad ligament ectopic pregnancy is a rare ectopic variant but with high fetomaternal morbidity rates. Transvaginal sonography is invaluable in the diagnosis. Emergency wards should be equipped with decision making protocol and hemodynamic instability should be managed with an open approach. Placental management is crucial to have a better prognosis.

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Figures
Figure 1: Fetus with suspected encephalocele
Figure 2: Ruptured right fallopian tube