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Saba Sohail

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CASE REPORT

HEMORRHAGIC CORPUS LUTEUM MIMICKING HETEROTOPIC PREGNANCY

Saba Sohail

ABSTRACT

Hemorrhagic corpus luteum (CL) is clinically known to simulate a number of medical, surgical and gynecologic conditions that cause acute abdomen. One such case is hereby presented that mimicked ectopic pregnancy clinically and heterotopic pregnancy on ultrasound. Laparoscopy was decisive.

KEY WORDS: *Corpus luteum. Hemorrhage. Pregnancy. Ectopic. Heterotopic. Ultrasound. Laparoscopy.*

INTRODUCTION

Corpus luteum is formed during the luteal phase of ovarian cycle. The natural history is to either regress and wither as corpus albicans, in the absence of pregnancy, or to continue till the complete maturation of placenta by the end of first trimester.¹ It may reach a size of 2-10 centimeters. Hemorrhage in CL is a rare complication that may have confounding clinical as well as sonographic appearance, particularly, during early gestation. Even in the non-pregnant state, it has been documented to simulate appendicitis, acute gastroenteritis, ureteric colic and other causes of acute abdomen.²⁻⁵

Heterotopic pregnancy (HP), on the other hand, is the simultaneous existence of an intra as well as extra-uterine pregnancy and is a rare complication of spontaneous pregnancy, occurring in one in 30,000 pregnancies.^{6,7} A case is hereby described where hemorrhage in CL kept on confounding the clinical as well as the sonographic picture.

CASE REPORT

A young married lady presented to the emergency room with severe lower abdominal pain, amenorrhea for 5 weeks and raised serum beta HCG levels consistent with early gestation. It was not accompanied by bleeding per vaginum. Six months back, she was operated for a left-sided tubal pregnancy and was describing the intensity of the present pain as being similar to the previous occasion. The present conception was spontaneous. On examination, the vitals were stable. The systemic examination was unremarkable. Local examination detected tenderness in the right lower abdomen localized in the right adnexa on per vaginal examination. An ultrasound of pelvis was advised to rule out ectopic pregnancy as suggested by this history and findings.

A trans-abdominal scan complimented by a trans-vaginal study was carried out. It demonstrated an intrauterine

Department of Radiology, Dow University of Health Sciences / Civil Hospital, Karachi.

Correspondence: Dr. Saba Sohail, House No. 4/II, Creek Lane 8, Phase VII, Defence Housing Authority, Karachi-75500.

Received January 13, 2004; accepted December 29, 2004.

gestation of 4-5 weeks, without cardiac flicker, which was corresponding with her last menstruation. In addition, the right ovary was enlarged with an irregular, cystic lesion measuring 3cm x 5cm (Figure 1). It also contained an echogenic focus of 6 mm, resembling a fetal pole, attached to one wall of the cystic lesion. The vascularity of the ovary was increased with the spectrum displaying the visceral pattern of low resistance. Moderate amount of free fluid was also present in the pelvis. The patient was very tender on probe manipulation. Considering the clinical scenario and the sonographic picture, the differentials were given as either a hemorrhagic corpus luteum or heterotopic pregnancy. Re-scan after five days was advised to compare the relative growth of the intrauterine fetal poles as well as the extrauterine echogenic focus. However, the pain intensified over the next two days and a re-scan was done. The same findings were demonstrated with comparable growth of the two and without the onset of cardiac flicker in either. This warranted a laparoscopic examination, which showed a hemorrhagic corpus luteum in the right ovary, which was left intact and treated conservatively. Conservative treatment was symptomatically oriented mainly with analgesics and rest.



Figure 1: Transvaginal scan of the pelvis showing the intrauterine sac and ovarian pathology with significant amount of fluid.

The patient improved over the next week. The pregnancy continued till term to deliver a normal healthy alive female baby.

DISCUSSION

Acute pain in the lower abdomen occurring in the first trimester of a known gestation may be due to a number of causes. Among them ectopic pregnancy (EP) is the most sinister. Pelvic ultrasound, particularly the trans-vaginal scan, is a highly sensitive and specific modality for confirming or refuting this diagnosis. It demonstrates the number, location and viability of the gestation. Trans-vaginal scan also helps in conservative management by potassium chloride injection.⁶ A normal pregnancy has an intrauterine location; a yolk sac accompanies the fetal pole in early stages. An anechoic CL cyst is seen in either ovary with minimal fluid in the cul-de-sac if at all.¹ An EP is located at abnormal site and is accompanied by pelvic tenderness, mass in adnexa and fluid in the pelvis. Heterotopic pregnancy is a twin or multiple gestation with the coexistence of the normal and abnormal gestational sac. The appearances cannot always be differentiated. HP can be diagnosed in 100% cases by ultrasound but EP can only be diagnosed in 94.3% cases.⁸ A spontaneous HP is a rare occurrence with an estimated frequency of below one per 30,000 pregnancies.⁷ However, coincident pregnancy may occur in women without the risk of ectopic pregnancy or multiple gestation.⁹ Once the ectopic sac is managed, majority progress to term. Hemorrhagic CL poses particular diagnostic difficulties. It is said to be a fascinating structure that may mimic neoplasia, ectopic gestation or even a degenerating fibroid.¹⁰ The sonographic diagnosis is particularly difficult when it ruptures releasing free fluid and blood clots in the pelvis.¹⁰

Confounding factors in the patient under discussion were marked pelvic tenderness; significant amount of fluid in the pelvis; increased ovarian vascularity likely to be due to active bleeding that also led to the increase in the size of clot all coupled with the previous history of ectopic pregnancy. However, it was noticed in retrospective review that the yolk sac was visible on the intrauterine sac but not in the ovarian simulator. A greater level of suspicion, as was adopted in this case, is necessary to reduce maternal morbidity and mortality.⁶

CONCLUSION

Continuous hemorrhage into a corpus luteum can simulate an ectopic or even heterotopic pregnancy clinically and on ultrasound. Ovarian vascularity may be increased in case of continuing bleeding. The presence or absence of either yolk sac or fetal cardiac flicker should be looked for whenever possible.

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