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## Broad ligament ectopic pregnancy: A case report

Ashraf Direkvand-Moghadam<sup>1</sup> and Azadeh Direkvand-Moghadam<sup>2</sup>

<sup>1</sup>Psychosocial Injuries Research Center, Faculty of Nursing and Midwifery, Ilam University of Medical Sciences, Ilam, Iran

<sup>2</sup>Student Research Committee, Ilam University of Medical Sciences, Ilam, Iran

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### ABSTRACT

*Ectopic Pregnancy occurs when the developing blastocyst becomes implanted at a site other than the endometrium of the uterine cavity. The prevalence of Ectopic Pregnancy is reported in 1.5% of all pregnancies. Broad ligament pregnancy is an uncommon kind of Ectopic Pregnancy that considered as one case of abdominal pregnancy. The maternal mortality rate of abdominal pregnancy has been reported in 20% of all cases because of a massive hemorrhage from partial or total placental separation. In the management of patients with Ectopic Pregnancy, an early diagnosis has important impact on treatment outcomes and reduces the treatment costs. We present a rare case broad ligament pregnancy with treatment of a single dose of 50 mg of intramuscular Methotrexate.*

**Keywords:** Case Report, ectopic pregnancy, intramuscular Methotrexate

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### CASE REPORT

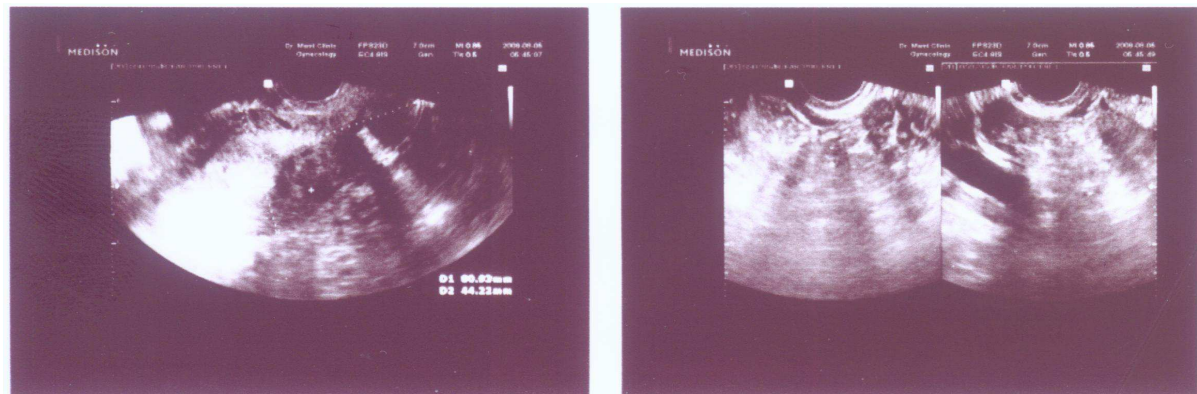
A 38 year-old female presented to a private gynecology clinic in Ilam, West of Iran with retard menstruation, positive pregnancy test ( $\beta$  HCG=212), left adnexal pain and spotting. The patient reported a full term pregnancy with normal vaginal delivery, 13 years ago and induces abortion at 5 weeks of gestational age 4 years ago. The gestational age was 6 weeks based on a regular Last Menstrual Period (LMP). Abdominal ultrasound was done so early in the investigation. Ultrasound results showed uterus with dimensions of 80 mm\* 43 mm. Endometrial thickness 12 mm. No gestational sac. Ovaries are normal in size and shape. Although the patient had no risk factors such as abdominal surgery, smoking, spontaneous abortion, pelvic inflammatory disease, and history of ectopic pregnancy, the risk of ectopic pregnancy was suspected according to the patient's clinical symptoms. Then a vaginal ultrasound was performed which did not report gestational sac and any abnormal findings. Thus, the patient was followed up with repeated measurements of  $\beta$ -hCG and vaginal ultrasound. The results are presented in table 1 and figures 1 and 2.

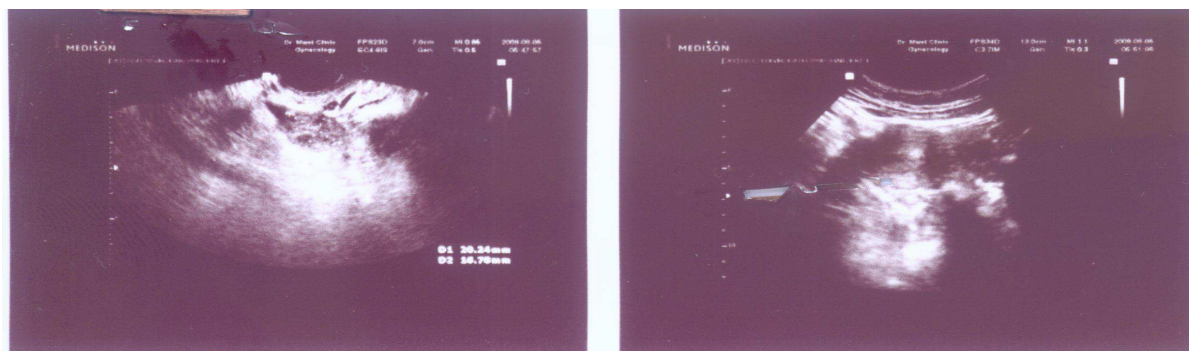
Gestational age based on LMP	Level of $\beta$ -hCG *	Vaginal ultrasound findings
28	41	
33	212	
40	987	Uterus size: 82 mm *42 mm diameter Endometrial thickness 11 mm No gestational sac Ovaries with normal in size and shape. No evidence of pregnancy in uterus No free liquid in the cul-de-sac
42	518	
44	512	Uterus: 81 *43 mm diameter, no gestational sac Endometrial thickness 12 mm Ovaries with normal in size and shape. No evidence of pregnancy in uterus No free liquid in the cul-de-sac
46	659	Uterus: 80 *44 mm diameter, no gestational sac Endometrial thickness 12 mm Ovaries with normal in size and shape. No evidence of pregnancy in uterus A hetrocho masses with 18 *17.5 mm diameter in left adnexal, near the ovarian Free liquid in the cul-de-sac

\* I.U.L



Fig 1: Vaginal ultrasound at 40<sup>th</sup> days of LMP





**Fig 2: Vaginal ultrasound at 46<sup>th</sup> days of LMP**

Having regard to constant vital signs, the patient's left adnexal pain, and elevated of  $\beta$ -hCG titers, an ectopic pregnancy was considered in the left broad ligaments. Hence the laboratory tests were conducted to determine patient's liver function. The patient received a single dose of 50 mg of intramuscular Methotrexate. A weekly monitoring level of  $\beta$ -hCG was carried out. The level of  $\beta$ -hCG received to non-pregnancy level about 3 weeks after the injection of Methotrexate.

Despite severe abdominal pain and vaginal bleeding in the first two weeks after injection, were reported any abnormal lab findings.

## DISCUSSION

Ectopic pregnancy (EP) is an abnormal pregnancy. EP occurs when the developing blastocyst becomes implanted at a site other than the endometrium of the uterine cavity (1). An E.P occurs in 1.5% of all pregnancies. However, the overall incidence of EP has been increased during the mid twentieth century, and near 20 per 1000 pregnancies in the early 1990s, but also, the incidence of EP has increased in the recent years (2). Numerous cases of EP pregnancy Has been reported in the Fallopian tubes (3, 4), cervix (5), ovary (3), abdomen (4), interstitial (5, 6) and uterus intra ligament (7). Broad ligament pregnancy is an uncommon kind of EP that considered as one case of abdominal pregnancy. In broad ligament EP the fetus or gestational sac develops within the leaves of the broad ligament (7). In the present case the pregnancy in the left broad ligament was diagnosed from clinical and transvaginal ultrasonographic findings. The maternal mortality rate of abdominal pregnancy has been reported in one of the five cases because of a massive hemorrhage from partial or total placental separation(8). Consequently, early diagnosis is essential for management of abdominal pregnancy.

In the present case, serum  $\beta$ -hCG was detectable in blood at 28<sup>th</sup> LMP, 3 days before an expected menstrual period. However, serum  $\beta$ -hCG level less than 1000 IU/L is associated with a higher relative risk of ectopic pregnancy, but also, only serum  $\beta$ -hCG level is not reliable for diagnosis of EP (9). Thus, in the present case applied both serum  $\beta$ -hCG level titer and transvaginal ultrasonographic evaluation.

A persistent left adnexal pain is reported in the present case. The physical findings in the EP are depending on the rupture and intraperitoneal hemorrhage. However, severe abdominal pain, tenderness and various degrees of hemodynamic instability are reported in women with intraperitoneal hemorrhage, but also, women without rupture may present with pelvic pain or vaginal bleeding, or both (10, 11).

In the present case demonstrated a single dose of 50 mg of intramuscular Methotrexate. The patient presented with persistence of left adenex pain, nausea and vaginal bleeding during 2 weeks after receiving Methotrexate. Other studies confirmed the single-dose methotrexate for the treatment of low  $\beta$ -hCG level and unruptured ectopic pregnancy (12). Previous studies reported the vaginal bleeding due to break down of decidual cas (8, 13).

**CONCLUSION**

In the management of patients with EP, an early diagnosis has important impact on treatment outcomes and reduces the treatment costs. Therefore the use of appropriate methods for early detection of the EP is recommended.

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