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## Title: Medical Management In Ectopic Pregnancy



### INTRODUCTION

Ectopic pregnancy is a significant cause of morbidity and mortality in the first trimester of pregnancy. Early diagnosis and appropriate treatment can reduce the risk of maternal mortality and morbidity related to ectopic pregnancy. Generally, the treatment is surgical, but recently, a medical management can be proposed. A treatment with methotrexate (MTX), a folic acid antagonist highly toxic to rapidly replicating tissues, achieves comparable results to surgery for the treatment of appropriately selected ectopic pregnancies and is now used commonly.

### DISCUSSION

Any pregnant woman can potentially have an ectopic pregnancy. But any damage to the fallopian tubes predisposes a woman to ectopic pregnancy. Knowledge of risk factors can help identify women who may benefit from close monitoring and early treatment. High-risk conditions include: previous ectopic pregnancy, history of tubal surgery (including a previous tubal sterilization), history of sexually transmitted infection, tubal infection, pelvic adhesions, and current use of an intrauterine device, conception resulting from assisted reproduction, cigarette smoking and in utero exposure to diethylstilbestrol. Ideally, the perfect case for medical management of an ectopic pregnancy with MTX should have the following criteria: hemodynamic stability, commitment to follow-up, no severe or persistent abdominal pain and normal liver and renal function tests. An immediate surgical management is indicated if the patient is unstable or present an acute abdomen. There are two commonly used MTX treatment regimens, either the multiple dose regimen or the single dose one. The multiple-dose protocol is a regimen was the first one used to treat ectopic pregnancy. It alternates MTX treatment with folic acid (leucovorin) therapy. It is continued until  $\beta$ -human chorionic gonadotrophin falls by 15% from its peak concentration. Approximately half of patients treated with this regimen will not require a full regimen. Following administration of treatment, the surveillance Can be done by Clinical symptoms level of plasma  $\beta$ -human chorionic gonadotrophin levels. A second MTX injection should be considered if the decrease in the plasma  $\beta$ -human chorionic gonadotrophin level on D7 is not satisfactory compared to the initial one . Weekly check of beta HCG level to ensure that their level is declining to become undetectable. Complete resolution of an ectopic pregnancy usually takes between 2 and 3 weeks but can take 6 to 8 weeks when initial  $\beta$ -hCG levels are very high. When declining  $\beta$ -hCG levels again rise, the diagnosis of a persistent ectopic pregnancy is made and the medical treatment is highly suspected. Therefore, a surgical treatment should surely be undertaken. With the one-injection regimen of methotrexate, if the Fernandez score is strictly less than 13, the success rate is 82% to 95%. Surgical treatment is indicated if the score is  $\geq 13$ . When these criteria are fulfilled, there is no difference in the success rates between medical treatment with MTX and conservative surge.

### CONCLUSION

Ectopic pregnancies must be diagnosed at early stages, to improve their outcomes. Medical management with Methotrexate is effective for ectopic pregnancies to preserve the fertility. The medical management by MTX seems to offer more benefits than the surgical treatment: it is less invasive, less expensive and is independent of expertise like laparoscopy. However, the risk of tubal rupture after medical treatment associated with a prolonged follow-up makes the compliance important in patient selection.

### REFERENCE

International Journal of Reproduction, Contraception, Obstetrics and Gynecology.

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#### Fernandez score for medical treatment of pregnancy

	1	2	3
Gestational age	> 49d	42-49d	< 42 d
HCG level	<1000	1000-5000	> 5000
Progesterone level	< 5 ng/ml	5-10	> 10 or unknown
Abdominal pain	Absent	Provoked	Spontaneous
Hematosalpinx	<1	1-3	>3 cm
Hemoperitoneum	0	1-100	>100

#### Contra-indication of MTX.

##### Contra-indications to MTX therapy<sup>5-9</sup>

##### Absolute contra-indications

Intrauterine pregnancy  
Evidence of immunodeficiency  
Moderate to severe anemia, leukopenia or thrombocytopenia  
Sensitivity to MTX  
Active pulmonary disease  
Active peptic ulcer disease  
Clinically important hepatic dysfunction  
Clinically important renal dysfunction  
Breast feeding

##### Relative contra-indications

Embryonic cardiac activity detected by transvaginal ultrasonography  
High initial hCG concentration (>5.000 mIU/mL)  
Ectopic pregnancy > 4 cm in size in transvaginal ultrasonography  
Refusal to accept blood transfusion  
Inability to participate in follow-up