



Westmead Fertility Centre  
**Early pregnancy algorithm**

**Treatment of ectopic pregnancy**

The principal choice lies between methotrexate and laparoscopic surgery. The choice of treatment should be discussed with the patient. If there still exists any doubt about the diagnosis, laparoscopy is the preferred treatment.

Methotrexate is an option where :

- there is no evidence of significant intra-abdominal bleeding
- any adnexal mass apparent on ultrasound is less than 2cm diameter
- the hCG concentration is less than 4000IU/L
- there is no fetal cardiac activity



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### Methotrexate Treatment

**Efficacy** : Less than 10% of women treated with methotrexate will require subsequent surgical intervention.

#### Criteria for methotrexate use

- no evidence of significant intra-abdominal bleeding
- any adnexal mass apparent on ultrasound is less than 2cm diameter
- the hCG concentration is less than 4000IU/L
- there is no fetal cardiac activity

#### Procedure

Patient admitted to the gynaecology ward on the morning that the methotrexate is to be administered.

Patient's height and weight is recorded

Blood drawn for baseline studies:FBC, EUC, LFT's and  $\square$ HCG (and blood group if this has not been previously done)

Anti-D is administered if the patient is Rh-ve and has evidence of a clinical pregnancy. Not required if hCG <2000IU/L and no pregnancy apparent on ultrasound.

Methotrexate to be charted at a dose of 50mg/m<sup>2</sup>

Body surface area can be calculated by using this formula

$$m^2 \Rightarrow \frac{\text{Weight (kg)} \times \text{Height (cm)}}{3600}$$

The pharmacists need to be paged to be made aware of the order.

The medical officer is required to give the dose as a single IMI injection.

The patient is to have observations done for three hours after the dose. If these remain stable the patient can be discharged with follow up arrangements as outlined below.

The patient must be warned that there is a risk of persistent ectopic pregnancy.

Up to 75% of patients will complain of abdominal pain after the treatment. Hence, it is not reliable indicator of ruptured ectopic.

Avoid sexual intercourse during treatment.

Reliable contraception for three months after treatment due to possibility of teratogenic effect.

#### Followup

Day 4: HCG titre

Day 7: HCG titre, FBC, EUC, LFT's

Weekly HCG titre until negative

For full clinical review on Day 7. If there is a less than 15% decline in on day 7 then consideration should be given to either laparoscopy or repeat of the treatment protocol. Remember that the HCG titres usually keep rising for three days after treatment but by day 7 should be declining. Full resolution requires 3-6 weeks.

Possible side effects of methotrexate include conjunctivitis, stomatitis, gastrointestinal upset and anaphylactic reaction.



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**References**

1. RCOG guideline 21 May 2004. The Management of Tubal Pregnancy.
1. Stovall TG, Ling FW, Gray LA. Single dose methotrexate for treatment of ectopic pregnancy. *Obstet Gynecol* 77: 754, 1991.
2. Stovall TG, Ling FW, Gray LA, Carson SA, Buster JE. Methotrexate treatment of unruptured ectopic pregnancy: a report of 100 cases. *77: 749, 1991*
3. Speroff L, Glase R, Kase N. *Clinical Gynecologic Endocrinology and Infertility.* 956-959. 1994 Williams and Wilkins