

<b>Department:</b>	Obstetrics and Gynecology (Ward)		
<b>Document:</b>	Departmental Policy and Procedure		
<b>Title:</b>	Medical Management of Ectopic Pregnancy with Methotrexate		
<b>Applies To:</b>	All Obstetrics and Gynecology Staff		
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## 1. PURPOSE:

- 1.1 To standardize the medical treatment for certain patients with ectopic pregnancy.

## 2. DEFINITIONS:

- 2.1 **Ectopic pregnancy-** is pregnancy that implants outside the uterine cavity.

## 3. POLICY:

- 3.1 Medical management of ectopic pregnancy is carried out using Methotrexate (MTX) in properly selected.
- 3.2 When MTX used for treatment of ectopic pregnancy, most reported side effects have been mild and self-limiting.
- 3.3 MTX can be used as single or multiple doses. However, single dose use is more common.
- 3.4 Receiving MTX for treatment of Ectopic pregnancy should fulfill the following criteria:
  - 3.4.1 Hemodynamically stable without active bleeding or signs of hemo-peritoneum.
  - 3.4.2 Non-laparoscopic diagnosis.
  - 3.4.3 Patient desires future fertility.
  - 3.4.4 General anaesthesia poses significant risk.
  - 3.4.5 Patient is able to return for follow up care.
  - 3.4.6 Patient has no contra-indication to MTX.
  - 3.4.7 Unruptured mass <3.5cm at its greatest diameter by ultrasound.
  - 3.4.8 No fetal cardiac motion.
  - 3.5.9 Absence of a large amount of fluid in pouch of Douglas (>1cm pool relative contraindication).
  - 3.4.10  $\beta$ -HCG (baseline) level does not exceed 3000 IU/ML.
- 3.5 Contra-indications to medical therapy:
  - 3.5.1 Breast feeding.
  - 3.5.2 Chronic hepatic or renal disease.
  - 3.5.3 Pre-existing blood dyscrasias e.g. bone marrow hypoplasia, leukopenia, thrombocytopenia or significant anemia.
  - 3.5.4 Known sensitivity to MTX.
  - 3.5.5 Concurrent use of Corticosteroid.

## 4. PROCEDURE:

- 4.1 Patient should be an in-patient, initially to monitor patient progress before and after treatment.
- 4.2 Patient should fulfill criteria and has no contra-indications to MTX.
- 4.3 Patient should discontinue folic acid supplement if she is taking due to its potential toxicity.
- 4.4 Blood is drawn for CBC, U&Es, LFT, blood type, Rh factor and presence of antibodies and quantitative  $\beta$ -HCG as baseline.
- 4.5 If patient is Rh negative and has no anti D Ab's she should receive Anti D immunoglobulin 250mcg IM before initiating MTX treatment to avoid Rh sensitization.



- 4.6 All blood investigations should be reviewed by the Physician before initiating the treatment.
- 4.7 MTX should only be ordered by physician.
- 4.8 MTX is ordered in the dose of 50 mg/ m<sup>2</sup> IM in one single dose. Body surface area (m<sup>2</sup>) =  $\sqrt{(\text{height (cm)} \times \text{weight (kg)} / 3600)}$ .  
(i.e. Commence the calculation inside the brackets & then calculate the square root to reach the BSA).  
E.g. A women 165cm & 60kg =  $165 \times 60 = 9900 \div 3600 = 2.75$   
Square root of 2.75 = 1.65, which gives a BSA of 1.65m<sup>2</sup>
- 4.9 Medication is obtained ready and prepared in the syringe with needle from the pharmacy.
- 4.10 Patients' vital signs are taken before administration of the drug.
- 4.11 Drug should be given by a physician or a nurse trained in giving MTX.
- 4.12 Drugs are given in pre-determined dose IM in one buttock.
- 4.13 Patient is kept as an in-patient for monitoring of signs and symptoms of any side-effects. Vital signs should be taken every 6 hours.
  - 4.13.1 Nausea and vomiting may occur and anti-emetic (e.g. Metoclopramide 10mg IV q8 hrs. PRN) can be given.
  - 4.13.2 Increase in abdominal pain (upto 75% of patients) can occur on day 3-7, mild, lasting for 24-48 hours.
  - 4.13.3 Mild vaginal bleeding or spotting can occur.
- 4.14 Serum quantitative  $\beta$  –HCG is repeated on day 4 as it is expected to be elevated.
- 4.15 Serum quantitative  $\beta$  –HCG is repeated on day 7 as it should decline by at least 15% from day 4 to day 7.
- 4.16 If serum  $\beta$  –HCG plateau or increase on day 7, another dose of MTX 50mg/ m<sup>2</sup> IM can be given and repeat  $\beta$  –HCG in 3 days or switch to surgical management.
- 4.17 Repeat CBC, U&Es, and LFT on day 7 then on day 14 to monitor any abnormality in organ function due to MTX toxicity. Mild elevation of hepatic enzymes is expected and self-limited.
- 4.18 If  $\beta$  –HCG declines  $\leq$  15% between day 4 and day 7, or day 7-10 in repeated doses, then do  $\beta$ - HCG weekly until  $\beta$  –HCG becomes undetectable <12mu/ ml.
- 4.19 Mean time to resolution is 35 days.
- 4.20 Avoid vaginal examination. TVS may be undertaken during first treatment week or subsequently.
- 4.21 Should any pancytopenia develop, moderately or severely disturbed liver enzymes or disturbed renal function occurs.
  - 4.21.1 Report to treating physician.
  - 4.21.2 Discontinue MTX.
  - 4.21.3 Obtain serum MTX level stat, then q6 hrs.
  - 4.21.4 Start Leucovorin calcium 10 mg/ m<sup>2</sup> IV stat dose then q 6 hrs x 48 hrs, or until MTX serum level is below 50 nmol/ L.
- 4.22 Patient should be instructed:
  - 4.22.1 To avoid prolonged sun exposure while on treatment as MTX increase skin sensitivity.
  - 4.22.2 To report any dizziness, severe headache, syncope or tachycardia.
  - 4.22.3 To avoid vitamins containing folic acid and NSAIDs.
  - 4.22.4 To avoid sexual intercourse while on treatment.

## 5. MATERIAL AND EQUIPMENT:

- 5.1 N/A

## 6. RESPONSIBILITIES:

- 6.1 Physician
- 6.2 Nurses
- 6.3 Pharmacist



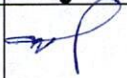




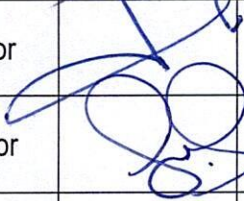


## 7. APPENDICES:

N/A

## 8. REFERENCES:

- 8.1 Ministry of Health, Clinical Policies and Procedures, Guidelines for Obstetrics and Gynecology, page no: 460-463.
- 8.2 Guidelines for management of ectopic pregnancy, RCOG, 2007.

## 9. APPROVALS:

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