

Changing Concept in the Management of Ectopic Pregnancy - A Case Report

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Abstract:

Ectopic pregnancy remains the great puzzle of gynaecology, no other pelvic condition gives rise to more diagnostic error like this condition. In the last 20 years, the management of ectopic pregnancy has evolved from a radical operative procedure to a more conservative approach. This case report describes a woman who experienced tubal ectopic pregnancy twice, with two different methods of management. In the first time she had left sided ruptured tubal ectopic pregnancy which was managed by laparoscopic left sided salpingectomy. In the next time, her right tube was involved with ectopic pregnancy. This time, she was decided to be managed by conservative medical treatment. The patient was treated with a single dose of injection methotrexate 50 mg intramuscularly. She was monitored closely at 4-5 days interval. At the 19th day, she was found to have complete resolution of the ectopic sac.

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Introduction:

An ectopic pregnancy develops as a result of the blastocyst implanting somewhere other than in the endometrium of the uterus. The incidence of ectopic pregnancy in the general population is approximately 2% of all pregnancies.¹ It is potentially a life threatening condition and incidence of it continues to increase day by day due to the occurrence of sexually transmitted diseases, IUCD users, pelvic adhesions and following the use of assisted reproductive technology.

Previously, ectopic pregnancy was considered as a condition to be managed surgically. In 1989 Stoval showed that medical management of ectopic pregnancy in some selective cases was safe and available and by 1991, single dose outpatient regimen was developed.²

The most widely used protocol is a single dose of injection methotrexate intramuscularly with subsequent doses if needed.^{3,5} The benefits of medical treatment are- it avoids surgery in 85% cases, has the same or high cure rate than surgery, less costly, is not skill dependant and higher future fertility rate than with surgery.^{8,9}

The following is a case report of a lady who presented in a private clinic twice with tubal ectopic pregnancy. In the

first instance, she was treated surgically, but secondly she was given medical management.

Case Report:

A 31 year old, regularly menstruating, nulliparous lady presented with lower abdominal pain for 1 day on 27th October, 2015. Her LMP was 20th September. She had a history of spontaneous abortion 1½ years back. Abdominal examination showed severe tenderness in lower abdomen. USG revealed left sided complex adnexal mass with empty endometrial cavity. β HCG was 5000 m IU/ml. Her haemodynamic condition rapidly deteriorated and laparoscopy was arranged along with blood transfusion. Left sided salpingectomy was done which showed ectopic tubal pregnancy on histopathology.

The patient was again planning for pregnancy after six months. From March, 2016, ovulation induction was being done, first with clomiphene citrate, then with letrozole. On July, she came with missing period for 4 days having mild lower abdominal pain and P/V passage of altered blood. Her β HCG level was 1062 m IU/ml and ultrasonography showed complex, mixed echogenic mass in right adnexa, 4.8x4.7 cm in size. Thus, she is having ectopic pregnancy, this time in the right side. The patient, along with her attendant was counseled regarding the necessity of preserving the single tube she has. They were offered the medical management, explaining the risk and benefit. They were also counseled to be ready for surgery, anytime, if conservative management fails. They gave consent and

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the treatment started. The patient was admitted and injection methotrexate 50 mg I/M was given. Tablet Folic acid was given twice a day. Serum β HCG was being measured at 4 days interval and USG at 7 days interval. The patient was monitored closely while she was admitted in the hospital.

After 4 days, her β HCG became 280 m IU/ml, which was one-third or 33% of the primary value. She was then discharged but continued to be followed up. After 19 days of administration of Methotrexate, her β HCG became 4.17 m IU/ml, i.e. non pregnant range. A cystic mass of 3.2x3.0 cm persisted in right adnexa. She was then considered risk-free, but advised to do an USG after one month. In the follow up-USG, her right adnexa was found normal.

Discussion:

Ectopic pregnancy is potentially a life threatening condition and incidence of it is continuing to increase day by day. The patient may or may not have symptoms of pregnancy,⁷ with or without a short period of amenorrhoea. Patient may complain of pelvic pain and irregular vaginal bleeding. Estimation of serum β HCG is the gold standard of diagnosis of pregnancy at the earliest. In a normal pregnancy, β HCG present in detectable level (>2 m IU/ml) in the maternal serum 8-10 days after fertilization. The level is doubled every 48 hours for the first 5 to 8 weeks after conception, rising well above 100,000 mIU/ml, then gradually decreases after 10 weeks⁴. In an ectopic pregnancy, β HCG level rise slower than normal and usually plateau at about 6 weeks <6000 m IU/ml. Lack of a 48 hour doubling or at least <66% increment indicates the presence of abnormal pregnancy¹⁰. Careful sonographic examination is very important. With a good vaginal probe by 5-6 weeks all pregnancies should be seen.

Surgery either by laparoscopy or laparotomy was a routine treatment for ectopic pregnancy. But now a days in selective cases medical treatment of ectopic pregnancy is prevailing with good success. Advantages of medical treatment are, it is an outpatient treatment, quick recovery and a 98% success rate in properly selected cases.⁹ There are also some cases where methotrexate is preferable to surgery like, cervical ectopic, cornual ectopic, patients likely to have dense pelvic adhesions i.e. pelvic endometriosis. On the other hand, in heteropic pregnancy methotrexate cannot be given as it can damage the intrauterine pregnancy.

Methotrexate inhibits the synthesis of purines and pyrimidines. Thus, it interferes with DNA synthesis and cell multiplication. Rapidly dividing cells are most vulnerable to methotrexate. This accounts for the drug's effect on trophoblastic tissues.⁶

Inclusion criteria for Methotrexate therapy: Patient stable haemodynamically, no sign of intra-peritoneal bleeding, gestational sac of size 2.5-4 cm without any cardiac activity, serum β HCG level \leq 2000 m IU/ml. Exclusion criteria: Acute ruptured ectopic pregnancy, patient with hepatic or renal dysfunction.

The ideal protocol is a single dose of injection Methotrexate 50 mg IM or 1 mg/kg body weight when body weight is < 50 kg. All patients are reviewed after 4 days and if β HCG level dropped by \geq 15%, the woman is reviewed weekly till β HCG falls to <5 m IU/ml. If the drop is < 15%, after 4 days a second dose of Methotrexate is given.

Patient is instructed to refrain from coitus until complete resolution of ectopic pregnancy and also to use of oral contraceptive pills or other contraceptives for 6 months after completion of treatment. All patients are advised to take folic acid 4 mg orally daily following completion of treatment. Finally, a repeat USG is done to detect abnormality after normalization of β HCG.

In our case, the initial serum level was 1062 m IU/ml, and then 50 mg injection Methotrexate was given. After 4 days β HCG became 280 mIU/ml which was one third of the initial value. The β HCG level became 4.17 mIU/ml (<5 mIU/ml) after 19 days. A small sized cystic mass, 3.2x3.0 cm was present in the right adnexa after 19 days. The patient was instructed to come with a follow up USG after one month. It was found to have normal adnexa. So, this case report gives a good impression about medical treatment in selective cases.

Conclusion:

In selected cases the advent of modern diagnostic and therapeutic modalities has changed the clinical scenario of ectopic pregnancy from one of the possible disasters (even death) to one of the potential success. Women who have unruptured ectopic pregnancy and are aware of the signs and symptoms of ectopic pregnancy can help their physicians to make their diagnosis earlier and to treat the problem with less invasive methods, preserve the fallopian tubes and greatly increase the hope achieving a healthy and fruitful outcome in the subsequent future pregnancies.

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