Medical management/Non-surgical of ectopic pregnancy: Case report and review of literature

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Abstract

Ectopic pregnancy is a cause of maternal morbidity and mortality. Management options are surgical, medical and expectant management. Medical management also known as the non-surgical approach is not widely practiced in our environment despite its several advantages over the traditional open salpingectomy including its less invasiveness, reduced cost and absence of anaesthetic risk, surgical risk and need for hospital admission. It however requires early presentation and diagnosis before tubal rupture, a well motivated patient and fulfilment of strict criteria in well selected patients.

Aim. To present this rare case report of the medical/non-surgical management of unruptured ectopic pregnancy and a review of the literature.

Case report: Mrs AW, Para 3⁶ (2 alive) who presented with lower abdominal pains and abnormal scanty vaginal bleeding following 6 weeks of amenorrhoea.

Her physical examination revealed a stable cardiovascular state. There were no significant abdominal findings. Vaginal examination revealed positive cervical motion tenderness. A diagnosis unruptured ectopic pregnancy was made.

Pelvic ultrasound scan revealed a cystic left adnexial mass measuring 1.94 cm by 1.7 cm with thickened, well circumscribed margins and it contained an echogenic mass (fetal pole) with cardiac pulsation (145/min). The crown-rump length was 0.76cm which corresponded to 6 weeks plus 5 days of gestation. Her serum β hCG was 3625.8miu/ml.

She expressed her aversion for a surgical intervention having had 3 previous surgeries. She gave an informed consent for medical/non-surgical management with intramuscular Methotrexate. She subsequently received 3 doses of weekly 100mg intramuscular methotrexate. Each dose of Methotrexate was preceded by re-evaluation of liver/renal function test, full blood count and serum β hCG. By the 4th week of treatment the success of her treatment was confirmed by the insignificant level of β hCG and findings at TVS. She was counselled on the need for prompt localization of any subsequent pregnancy.

Conclusion: We presented Mrs AW who was successfully managed for unruptured ectopic pregnancy using the medical/non-surgical approach on out-patient basis. Proper patient selection and follow-up is required for a favourable outcome,

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1 **Introduction**

Ectopic pregnancy is a cause of maternal morbidity and mortality. [1] The incidence is on the increase probably due to increasing cases tubal damage from poorly treated pelvic inflammatory diseases. [1,2] Early diagnosis and treatment remains the option in reducing morbidity and mortality. [3-4,5-8] A high index of suspicion is important as the presentation may not be with the typical six weeks amenorrhoea with abdominal pain and/or vaginal bleeding. [1,5]

Management options are surgical, medical and expectant management. [1,9] The main stay of treatment in our environment and most developing nations is the surgical management typically the open salpingectomy with its attendant disadvantages including anaesthetic and surgical risks as well as family disruption from prolonged hospital stay and income losses.[2-4,9-10] Laparoscopic salpingectomy reduces morbidity and hospital stay but the skill and facilities for it are not readily available and its high cost were available puts it out of reach of the average patient.[1-4] Medical management also known as the non-surgical approach is not widely practiced in our environment despite its several advantages over the traditional open salpingectomy including its less invasiveness, reduced cost and absence of anaesthetic risk, surgical risk and need for hospital admission.[2-5,11-12] It however requires early presentation and diagnosis before tubal rupture in addition well motivated patients who must fulfil the required strict criteria after proper patient selection.[1-3]

We present a case of successful medical management of a tubal ectopic pregnancy in a patient with a strong aversion for surgical intervention after 3 previous surgeries with a turbulent post-operative period in her last surgery.

2 **Case report**

Mrs AW was a 26 year old house wife, Para 3rd (2 alive) who presented to our gynaecology clinic on 13/4/2022 with a one week history of lower abdominal pains and scanty menstrual flow 2 weeks earlier. The lower abdominal pain was intermittent, non-radiating and relieved by oral paracetamol. There was associated weakness but no dizziness or fainting spells. She presented to the clinic when oral paracetamol could no longer relieve her symptoms. Her last confinement was in 2019. The pregnancy was uneventful and carried to term. Delivery was by elective repeat Caesarean Section for 2 previous Caesarean Sections at term. Delivery was complicated by dense peritoneal adhesions. The baby was a macrosomic baby who suffered an early neonatal death in the Special Care Baby Unit. Her previous 2 confinements were both by Caesarean Sections for cephalo-pelvic disproportion and short inter-pregnancy interval respectively with good fetal outcomes.

Her last normal menstrual period was 6 weeks earlier followed by 2 days of scanty bleeding per vaginam 2 weeks prior to presentation. She had no prior menstrual abnormalities and practiced the withdrawal method for contraception. She was a known asthmatic with good control. At presentation, she was a morbidly obese lady weighing 130kg with a BMI of 50 Kg/m². She was not pale, afebrile, anicteric with no pedal oedema. Her pulse rate was 70b/min and her blood pressure was 110/80mmHg. Her heart sounds were normal. Her abdomen was full, moved with respiration with mild left iliac/suprapubic tenderness. There was rebound tenderness in the left iliac fossa. Her liver and spleen were not palpable while her kidneys were no ballotable. There was no demonstrable free peritoneal fluid. Vaginal examination revealed no active bleeding. The vulva and vagina were normal. The uterus was slightly bulky, her cervix was posterior and soft with moderate cervical motion tenderness. Her cervical os was closed and the pouch of Douglas wasempty. A pelvic ultrasound scan revealed a cystic left adnexial mass measuring 1.94 cm by 1.7 cm with thickened, well circumscribed margins and it contained an echogenic mass (fetal pole) with cardiac pulsation (145/min). The crown-rump length was 0.76cm which corresponded to 6 weeks plus 5 days of gestation. Her serum β hCG was 3625.8miu/ml. Her blood group was ‘O’ Rh D positive and full blood count revealed lymphocytosis and a haemoglobin of 10.8g/dl. Her liver/renal function tests were within normal limits.

The diagnosis of unruptured left ectopic gestation and the treatment options/prognosis were explained to her. She expressed her aversion for a surgical intervention having had 3 previous surgeries. She gave an informed consent for non-surgical management with intramuscular Methotrexate. The possibility of treatment failure was explained to her and she was adequately counselled on the need to immediately report worsening abdominal pain, vaginal bleeding, dizziness or fainting spells. She was to avoid sexual intercourse and folic acid during the treatment. She subsequently received 3 doses of weekly 100mg intramuscular methotrexate. Each dose of Methotrexate was preceded by re-evaluation of liver/renal function test, full blood count and serum β hCG. Her full blood count and liver/renal function tests remained essentially the same while her serum β hCG showed a steady decline to 3110 miu/ml and 230.4miu/ml
by week 1 and week 2 respectively. She complained of severe lower abdominal pains after the 3rd dose of Methotrexate. A trans-vaginal ultrasound scan revealed a 3 by 3 cm left adnexial mass with a tiny echogenic component but no cardiac pulsation. There was no fluid in the Pouch of Douglas. She was reassured and placed on paracetamol tablets and continued on weekly β hCG assay. By the 4th week her serum β hCG was 9.4miu/ml. She was informed of the success of the treatment and counselled on the need for prompt localization of any subsequent pregnancy.

3 Discussion

Mrs AW was a 26 year old house wife, Para 3 (2 alive) who presented to our gynaecology clinic on 13/4/2022 with a one week history of lower abdominal pains and scanty menstrual flow 2 weeks earlier. The lower abdominal pain was intermittent, non-radiating and relieved by oral paracetamol. There was associated weakness but no dizziness or fainting spells. She presented to the clinic when oral paracetamol could no longer relieve her symptoms. Her last confinement was in 2019. The pregnancy was uneventful and carried to term. Delivery was by elective repeat Caesarean Section for 2 previous Caesarean Sections at term. Delivery was complicated by dense peritoneal adhesions. The baby was a macrosomic baby who suffered an early neonatal death in the Special Care Baby Unit. Her previous 2 confinements were both by Caesarean Sections for cephalo-pelvic disproportion and short inter-pregnancy interval respectively with good fetal outcomes. Her last normal menstrual period was 6 weeks earlier followed by 2 days of scanty bleeding per vaginam 2 weeks prior to presentation. She had no prior menstrual abnormalities and practiced the withdrawal method for contraception. She was a known asthmatic with good control. At presentation, she was a morbidly obese lady weighing 130kg with a BMI of 50 Kg/m². She was not pale, afebrile, anicteric with no pedal oedema. Her pulse rate was 70b/min and her blood pressure was 110/80mmHg. Her heart sounds were normal. Her abdomen was full, moved with respiration with mild left iliac/suprapubic tenderness. There was rebound tenderness in the left iliac fossa. Her liver and spleen were not palpable while her kidneys were no ballotable. There was no demonstrable free peritoneal fluid. Vaginal examination revealed no active bleeding. The vulva and vagina were normal. The uterus was slightly bulky, her cervix was posterior and soft with moderate cervical motion tenderness. Her cervical os was closed and the pouch of Douglas was empty. A pelvic ultrasound scan revealed a cystic left adnexial mass measuring 1.94 cm by 1.7 cm with thickened, well circumscribed margins and it contained an echogenic mass (fetal pole) with cardiac pulsation (145/min). The crown-rump length was 0.76cm which corresponded to 6 weeks plus 5 days of gestation. Her serum β hCG was 3625.8miu/ml. Her blood group was ‘O’ Rh D positive and full blood count revealed lymphocytosis and a haemoglobin of 10.8g/dl. Her liver/renal function tests were within normal limits.

Her abdominal ultrasound revealed a hypechoic mass with no internal vascularity. There was a fluid collection measured 2.8cm by 2.6cm adjacent to the left adnexial mass. The diagnosis of un-ruptured left ectopic gestation and the treatment options/prognosis were explained to her. She expressed her aversion for a surgical intervention having had 3 previous surgeries. She gave an informed consent for non-surgical management with intramuscular Methotrexate. The possibility of treatment failure was explained to her and she was adequately counselled on the need to immediately report worsening abdominal pain, vaginal bleeding, dizziness or fainting spells. She was to avoid sexual intercourse and folic acid during the treatment. She subsequently received 3 doses of weekly 100mg intramuscular methotrexate. Each dose of Methotrexate was preceded by re-evaluation of liver/renal function test, full blood count and serum β hCG. Her full blood count and liver/renal function tests remained essentially the same while her serum β hCG showed a steady decline to 3110 miu/ml and 230.4miu/ml by week 1 and week 2 respectively. She complained of severe lower abdominal pains after the 3rd dose of Methotrexate. A trans-vaginal ultrasound scan revealed a 3 by 3 cm left adnexial mass with a tiny echoic component but no cardiac pulsation. There was no fluid in the Pouch of Douglas. She was reassured and placed on paracetamol tablets and continued on weekly β hCG assay. By the 4th week her serum β hCG was 9.4miu/ml. She was informed of the success of the treatment and counselled on the need for prompt localization of any subsequent pregnancy.

4 Conclusion

We presented Mrs AW, an obese patient with high surgical risk, who was successfully managed for unruptured ectopic pregnancy using the medical/non-surgical approach with multi-dose methotrexate on out-patient basis. Proper patient selection and follow-up is required for a favourable outcome in this alternative to the traditional open salpingectomy.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

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