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# Medical Termination of Pregnancy – An Emerging Risk for Maternal Mortality

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**Abstract**

*Presentation*
Ectopic pregnancy (EP) is a significant cause of maternal morbidity & mortality. This case-report discusses the management a 24-year-old patient who presented with right (Rt) lower abdominal pain & hypovolemic shock. She had a medical termination of pregnancy (MTOP) previously.
Diagnosis: The patient was hemodynamically unstable with tenderness on Rt iliac fossa & Rt vaginal fornix. Ultrasound showed empty uterus & free fluid in abdomen and pelvis. Beta human Chorionic Gonadotrophin (β hCG) was 5431 units & Hemoglobin (Hb) was 7gm/dl.
Treatment: She received fluids & four units of uncross-matched blood transfusions before laparoscopic Rt salpingectomy for EP.
Conclusions: Keeping an index of suspicion of EP in a young woman with severe abdominal pain & vaginal bleeding is important irrespective of a recent MTOP. MTOP is offered in asymptomatic women without ultrasound to confirm intrauterine pregnancy (IUP). Symptoms of vaginal bleeding and abdominal pain are misleading as commonly attributed to MTOP rather than EP.

*Introduction*

This case report provides insights into a serious & life-threatening event i.e., maternal collapse due to ruptured EP after a termination of pregnancy. It could have been prevented by an ultrasound for location of the pregnancy. Offering an ultrasound to confirm IUP to patients requesting abortifacients is not a routine & this practice may result in masking symptoms & signs of EP in patients having abortion and result in mortality due to misdiagnosis and overlap in symptoms of EP and abortion.

*Treatment*
A young woman was brought in by ambulance with symptoms of hypovolemic shock, associated with severe Rt iliac fossa abdominal pain and nausea for half an hour. She gave a history of MTOP 2 weeks ago with her General Physician and vaginal bleeding for 3 days after MTOP.

The patient was hemodynamically unstable with pallor, hypotension (60/30 mmHg), tachycardia (pulse 110), & cold and clammy peripheries. The examination revealed mild tenderness on Rt iliac fossa & Rt vaginal fornix. She received Fentanyl for analgesia before the examination which might have masked the findings.

A bedside ultrasound showed empty uterus, & free fluid inside the abdomen and pelvis, including the Morrison's pouch. Beta human Chorionic Gonadotrophin (β hCG) was 5431 units. Her hemoglobin (Hb) was 7gm/dl with normal platelets, liver & renal enzymes. We made a provisional diagnosis of acute abdomen with ruptured EP & a differential diagnosis of hemorrhagic/ruptured ovarian cyst.

Immediate resuscitation was started with intravenous fluids & four units of uncross-matched blood. Laparoscopic Rt salpingectomy was performed for tubal EP, & there was 2.5 L hemoperitoneum (Figure 1). She received a 5th unit of the red cells for Hb 7.8 gm/d in High Dependency Unit & went home on the 2nd postoperative day. Histology confirmed an EP in Rt Fallopian Tube (Figure 2).

Discussion

EP is a significant cause of maternal morbidity and mortality.[2–4] Several risk factors for EP include pelvic inflammatory disease, smoking, previous tubal surgery, previous EP,[2] in vitro fertilization, intrauterine device,[5,6] age > 40 years, black women,[7] & in utero Diethylstilbestrol exposure[8].

Preventing EP-related morbidity & mortality is challenging as the symptoms and signs of shock with EP in young women appear late due to their good physiological reserves. Health care providers ideally should be able to diagnose & exclude women with EP before MTOP.[9] Although EP is a contraindication to medical abortion,[10] the current practice is to prescribe abortifacients to asymptomatic women on demand without prior imaging. Thus the risk of EP in this subgroup of women cannot be out ruled. Red flags such as no or little bleeding after MTOP, severe ongoing abdominal pain, &/or collapse in women of reproductive age group necessitate out ruling EP with β hCG and ultrasound imaging.[11]

A literature review suggests a very low frequency of EP after MTOP.[9] Contrarily Rath D, et al[12] reported a 12% risk of EP in 100 women with MTOP. Our patient presented with a ruptured EP after MTOP. Recently a similar case of EP was reported with a young girl presented in the emergency department after a self-managed abortion.[13] Kelly Cleland et al [14] reported one maternal death as the result of undiagnosed EP in their cohort of 33805 women who availed the abortion services in 2009 and 2010.

An ultrasound scan is recommended in a collapsed woman with anemia to exclude haemorrhage.[15] Confirming pregnancy location before MTOP is debatable. Its merits are reassurance & reducing morbidity and mortality.[16] Demerits include financial costs, inconclusive results, false reassurance & emotional stress.[16] EP is uncommon among women presenting for abortion.[16,17] T Rath D, et al[12] advised a pre-termination ultrasound to confirm IUP.

This case report elucidates the association between induced abortion & EP and highlights MTOP as a risk factor for EP. Our patient had no risk factor for EP. An interesting study by Cacciatore B, et al showed EP rate of 24.4% among women with certain screening factors and early diagnosis facilitated elective treatment.[18] Recent NICE guideline [19] empower asymptomatic women to opt for MTOP

without ultrasound. On the contrary, we recommend an individualized approach & advise that asymptomatic women with certain Red Flag Risk Factors for EP (Table 1) get a diagnosis of IUP before MTOP. We recommend future research studies to explore this approach.

**Declarations of Conflicts of Interest:**
None declared.

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**List of Abbreviations:**

Beta human Chorionic Gonadotrophin: β hCG
Ectopic Pregnancy: EP
Hemoglobin; Hb
Intrauterine pregnancy: IUP
Right: Rt
MTOP: Medical Termination of Pregnancy
NICE: National Institute for Health and Care Excellence

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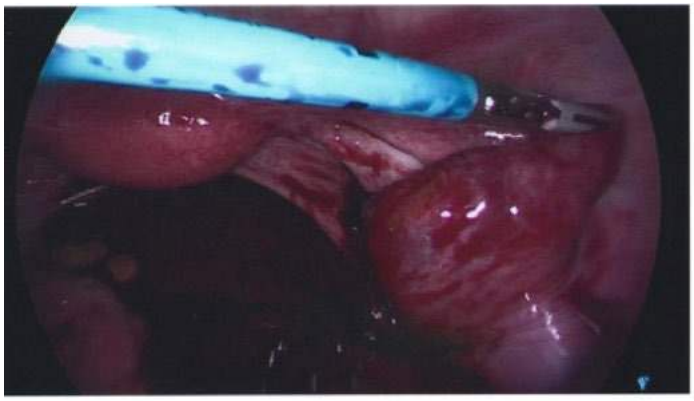

*Figure 1: Massive Hemoperitoneum and Right Tubal Ectopic*

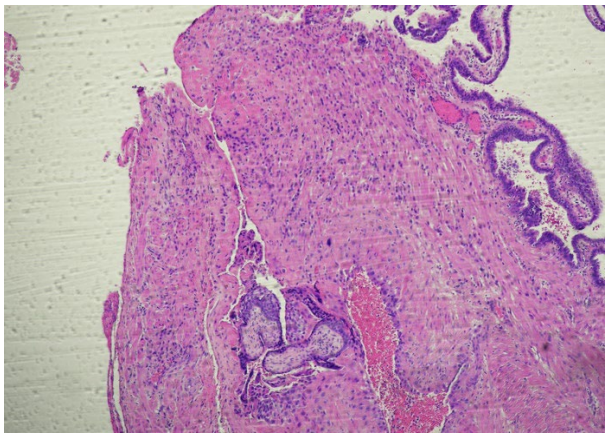

*Figure 2: Histology of Right Tubal Ectopic*

Screening Red Flags for imaging asymptomatic women before MTOP to out rule ectopic pregnancy.

1. Previous ectopic pregnancy[2,8]
2. Previous tubal surgery/ sterilization[2,8]
3. IVF pregnancy
4. Current IUCD users [2]
5. Previous pelvic abscess
6. Tubal pathology/blockage[2,8]
7. In utero DES exposure[8]

*Table 1: Screening Red Flags for imaging before MTOP to out rule ectopic pregnancy.*

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