Diagnostic Dilemma in Ruptured Tubal Ectopic Pregnancy

Executive Summary · Country Focus: The Gambia

Overview

Ectopic pregnancy affects about 1–2% of pregnancies and remains the leading cause of maternal death in the first trimester. In many African settings women present late, often after rupture. This session used a case from The Gambia, in which a falling β-hCG and conflicting scans delayed diagnosis, to show why clinical judgement must guide how tests are interpreted.

Case at a Glance

Patient	33-year-old woman
Presentation	About eight weeks' amenorrhoea, two weeks of vaginal bleeding and persistent lower abdominal pain
Conflicting scans	12 mm "intrauterine sac"; then reported as complete miscarriage; left adnexal haematoma; left ovarian cyst or enlarged ovary
β-hCG	Falling, while symptoms persisted
Diagnosis	Repeat specialist ultrasound confirmed a ruptured ectopic pregnancy
Surgery	Laparotomy (laparoscopy unavailable because of equipment failure): ruptured left tubal ectopic, about 500 mL haemoperitoneum, severely damaged tube; left salpingectomy
Outcome	Uneventful recovery; follow-up and fertility counselling arranged

Why the Diagnosis Was Delayed

- **A pseudosac can mimic a pregnancy:** intrauterine pregnancy is confirmed only by a yolk sac or embryo within an eccentrically placed sac.
- **"Complete miscarriage" was falsely reassuring:** it should not be diagnosed without a previously confirmed intrauterine pregnancy. Otherwise the woman has a pregnancy of unknown location and needs follow-up.
- **A falling β-hCG** does not exclude ectopic pregnancy; rupture can occur at any level.
- **Persistent pain or bleeding** after a presumed miscarriage always warrants reassessment.

Making the Diagnosis

Consider ectopic pregnancy in any woman of reproductive age with amenorrhoea, abdominal pain or bleeding. Risk factors include previous ectopic, tubal surgery, pelvic inflammatory disease, an IUD in situ, assisted conception and smoking, but up to a third of women have none.

- **Transvaginal ultrasound:** look for an adnexal mass that moves separately from the ovary, an empty uterus and free fluid. Fluid in Morison's pouch indicates significant bleeding.
- **Serial β-hCG 48 hours apart:** a rise of more than 63% suggests a viable intrauterine pregnancy and a fall of more than 50% a failing one. Anything in between needs specialist review for possible ectopic.
- **Discriminatory zone:** an empty uterus above about 1,500–3,500 IU/L raises suspicion, but the threshold must never be used alone to decide location.
- **Without ultrasound,** a positive pregnancy test with abdominal pain, peritonism or shock is a ruptured ectopic until proven otherwise.

Management

Approach	When it fits
Expectant	Stable, minimal pain, no fetal heartbeat, small mass and low, falling β-hCG, with reliable follow-up

Approach	When it fits
Methotrexate	Stable and unruptured, no fetal heartbeat, mass under 35 mm and β-hCG generally below 1,500 IU/L (up to 5,000 in some protocols); needs serial β-hCG
Surgery	Rupture, haemodynamic instability, significant pain, a fetal heartbeat, or when follow-up is not possible

An unstable woman needs resuscitation and immediate surgery. Laparoscopy is preferred where available and safe, but laparotomy remains appropriate for instability or when equipment or expertise is lacking. Where blood is scarce, autotransfusion of uncontaminated haemoperitoneum can be life-saving. Salpingectomy is advised if the other tube is healthy; salpingotomy may be considered if it is damaged, with β-hCG follow-up for persistent trophoblast. Rhesus-negative women having surgery should receive anti-D immunoglobulin.

Perspectives from Across Africa

- Train clinicians to diagnose ectopic pregnancy clinically where ultrasound is unavailable.
- Limited theatre access, especially after hours, can delay emergency surgery and needs prioritisation.
- Direct communication between gynaecologists and radiologists helps resolve conflicting scans.
- Earlier diagnosis widens options, including medical treatment and tube-preserving surgery.

After an Ectopic Pregnancy

Recurrence risk is around 10–15%. Women should be counselled, offered contraception if they wish, and advised to have an early transvaginal scan in any future pregnancy. Most women with one healthy tube go on to conceive naturally.

Key Takeaways

- Never exclude ectopic pregnancy on a single β-hCG result or scan report.
- Do not diagnose complete miscarriage without a previously confirmed intrauterine pregnancy.
- Persistent pain or bleeding demands reassessment, however reassuring the tests.
- Timely surgery saves lives; laparotomy remains appropriate when laparoscopy is not available.
- Earlier diagnosis reduces morbidity and preserves fertility options.