Sirat Zafar
NYPQ ED (Flushing, Queens)
Journal Article: Future Perspectives of Ectopic Pregnancy Treatment—Review of Possible Pharmacological Methods (2022)

This article discusses ectopic pregnancy as a serious and potentially life-threatening condition where implantation occurs outside of the uterus, most commonly in the fallopian tube. It highlights that ectopic pregnancy occurs in about 2% of pregnancies and remains a leading cause of first trimester maternal mortality. One of the main points is that presentation can be very variable. While patients may have the classic symptoms of vaginal bleeding and abdominal pain, not all patients present this way, so it is important to always keep ectopic pregnancy on the differential in any reproductive-age female with a positive pregnancy test.

The article explains that diagnosis relies on a combination of β-hCG and transvaginal ultrasound, but a key issue is relying too much on hCG levels alone. Ectopic pregnancy can occur at a wide range of hCG levels, so ultrasound is essential in all symptomatic patients. Findings such as absence of an intrauterine pregnancy, presence of an adnexal mass, and free fluid are highly concerning, especially for possible rupture. Management depends on whether the patient is stable or unstable. Methotrexate is the main medical treatment and works by stopping growth of trophoblastic tissue. It can be given as a single-dose or multi-dose regimen, with the single-dose being more commonly used due to fewer side effects. However, an important takeaway is that methotrexate is only used in specific patients. Patients must be hemodynamically stable, have no evidence of rupture, and cannot have significant free fluid or hemoperitoneum. If there is any concern for rupture, or if the patient is unstable, then surgical management is required, usually with laparoscopy. Another key point the article emphasizes is that patients can still appear stable even if rupture is occurring, which means normal vital signs do not rule out a dangerous ectopic pregnancy.

An interesting point from the article is that **methotrexate and surgical management have similar success rates, and treatment decisions are primarily based on patient stability and β-hCG levels rather than superiority of one approach. Additionally, β-hCG levels can help predict treatment success, with higher levels associated with increased likelihood of medical treatment failure.**

This directly applies to my patient, Ms. E.S., a 40 yo G6P6 female with an IUD who presented with vaginal bleeding, abdominal pain, and a positive pregnancy test. Her ultrasound showed no intrauterine pregnancy, a left adnexal mass, and free fluid, which is highly concerning for ectopic pregnancy with possible rupture. Her IUD is also an important risk factor, since pregnancies that occur with an IUD in place are more likely to be ectopic. Based on the article, she is not a candidate for methotrexate due to the presence of free fluid and concern for rupture, so she requires urgent surgical management.

One thing I learned from this article is that methotrexate is not used as broadly as I initially thought, and that management decisions depend heavily on stability and imaging findings. It also reinforced that even if a patient looks stable, ectopic pregnancy can still be life-threatening, so early recognition and intervention are critical.

Citation: Leziak M, Żak K, Frankowska K, Ziółkiewicz A, Perczyńska W, Abramiuk M, Tarkowski R, Kułak K. Future Perspectives of Ectopic Pregnancy Treatment-Review of Possible Pharmacological

Methods. Int J Environ Res Public Health. 2022 Oct 31;19(21):14230. doi: 10.3390/ijerph192114230. PMID: 36361110; PMCID: PMC9656791.

- Ectopic pregnancy = implantation outside uterus (most commonly fallopian tube)
- Occurs in ~2% of pregnancies; leading cause of 1st trimester maternal mortality
- Presentation varies, not always vaginal bleeding/abd pain → **must suspect in any reproductive-age female with + pregnancy + pain/bleeding**
- Diagnosis = **β-hCG + transvaginal ultrasound (US is essential)**
- Key findings:
    - No intrauterine pregnancy
    - Adnexal mass
    - Free fluid → concern for rupture
- **Do NOT rely on hCG alone** (EP can be present at any level)
- Management depends on **stability**:
    - Stable → methotrexate (if criteria met)
    - Unstable or rupture → **surgery (laparoscopy)**
- Methotrexate only for **specific patients (no rupture, no hemoperitoneum)**
- Patients can appear **stable even if rupture is occurring**
- Methotrexate vs surgery → **similar success rates**
- Higher β-hCG → higher chance of methotrexate failure