A SPONTANEOUS HETEROTOPIC PREGNANCY PRESENTING AS AN ACUTE APPENDICITIS

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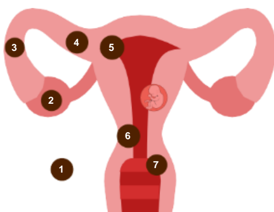
INTRODUCTION

Heterotopic pregnancy (HP) is defined as simultaneous occurrence of an intrauterine and extrauterine pregnancy [1]. Spontaneous HP reported incidence is 1:30000 [1]. **Acute appendicitis (AA)** is the **most common non-obstetric surgical emergency** in gravid females with an occurrence of 1 in 1500 [2]. Diagnosis of HP can be difficult in pregnant women with clinical presentation of right iliac fossa pain and acute abdomen. HP may not be considered as a top differential in presence of a viable intrauterine pregnancy (IUP).

AIM

- **We present an interesting case of spontaneous HP initially presenting as AA.**
- **A Medline search identified sixty-five articles with twenty-nine review articles and case reports**
- **A review of the literature was undertaken to understand the clinical problem**
- **Our aim is to increase awareness amongst trainee obstetricians and general surgeons**

LOCATIONS OF HETEROTOPIC PREGNANCY



1. **Abdominal / Ceaserean scar**
2. **Ovarian**
3. **Tubal Ampullar**
4. **Tubal Isthmic**
5. **Interstitial / Cornual**
6. **Intramural**
7. **Cervical**

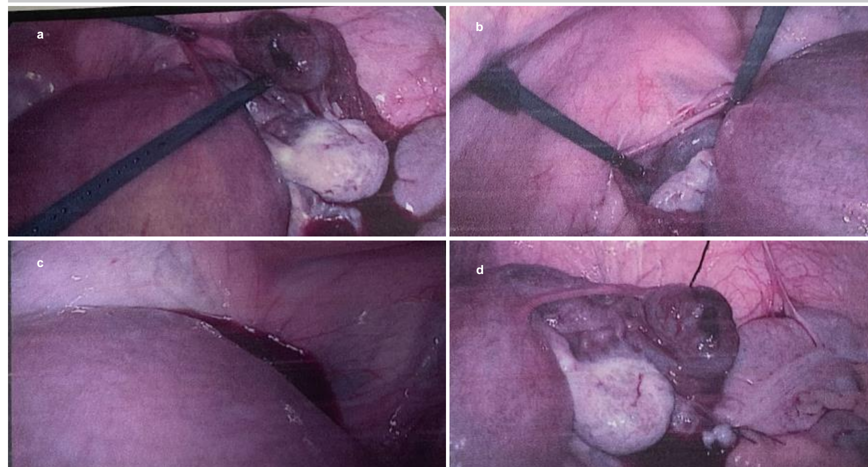
RISK FACTORS FOR HP

1. **Assisted reproductive techniques (1: 100- 500) [1]**
2. **Pelvic inflammatory disease**
3. **Infertility treatments**
4. **Previous abortions**
5. **Tubal damage**
6. **Abdominal/pelvic surgery or trauma**

CASE SUMMARY

A 29-year-old female, G4P3 attended A&E with a two-day history of intermittent and worsening lower abdominal pain. The pain was stitch like in nature, exacerbated by movement and progressively moved to the right iliac fossa. Her LMP was unknown with no relevant past medical history. On abdomen examination, she was tender in the right lower quadrant, with guarding, and a positive Rovsing's sign. Systemic enquire and vital signs were unremarkable.

INTRA-OPERATIVE IMAGES OF RIGHT ECTOPIC



a. Right ectopic tube and right ovary in the presence of a gravid uterus, b. Left fallopian tube and left ovary, c. Blood in the utero-vesicle pouch, d. Right ectopic tube and ovary with the stump of the appendix

LEARNING POINTS

- **Confirmation of IUP in a patient with no risk factors does not exclude the possibility of HP**
- **A high index of suspicion for ectopic pregnancy is required in a pregnant woman presenting with an acute abdomen**
- **Preoperative consent should always include the possibility of unexpected finding and treatment**
- **The importance of a good history and positive clinical signs cannot be underestimated**

DIAGNOSIS

Her beta-HCG was 75,321 IU/L and CRP mildly elevated**. A point of care ultrasound (US)** confirmed a viable singleton IUP. She was admitted under the care of the surgical team as a suspected AA. The differential diagnosis considered the remote possibility of an ectopic pregnancy and she was consented for an appendicectomy and/or a salpingectomy by the general surgeon. A **diagnostic laparoscopy** was performed the following morning due to the increasing clinical severity of pain. Laparoscopy revealed a normal appendix and right tubal ectopic pregnancy. The gynaecology team was called. A right salpingectomy and appendectomy were performed. **Histology** confirmed the diagnosis of right ectopic pregnancy with a mildly inflamed appendix and right tubal wall with haemorrhage incorporating chorionic villi and trophoblastic elements. The IUP was preserved, however, the patient decided to have a medical termination of the pregnancy at 12+3 weeks gestation.

DISCUSSION

The fallopian tube is the most reported site (72%) of spontaneous HP with 75% of cases reported in the right-side [2-3]. **Spontaneous HP remains a diagnostic challenge** due to its rarity and non-specific presentation. **High-resolution transvaginal US (TVS)** is the modality of choice for investigation. MRI has shown early promise but not practical for routine use [4]. In our literature review, 41% (12/29) case studies had a difficult preoperative diagnosis. One study showed 76% of cases had intraoperative diagnosis versus 26% pre-operatively [4]. Laparoscopy or laparotomy is the treatment of choice for HP. Laparoscopy allowing for less manipulation of the uterus. Interestingly, we noted two publications from South Wales acknowledging the diagnostic dilemma associated with HP [5,6]. Perhaps incidence is higher than what is literature.

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