AN UNUSUAL CASE OF RUPTURED INTRAMURAL ECTOPIC IN THE SECOND TRIMESTER

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INTRODUCTION

We report an unusual case where the diagnosis of a **ruptured intramural ectopic** at 15th gestation week was made intraoperatively.

DEFINITION	**Ectopic pregnancy** remains one of the leading causes of maternal mortality worldwide. Ectopic pregnancy is considered unsustainable and potential life threatening in case of rupture. **Intramural ectopic** is described when the gestation sac is implanted within the **myometrium** separate from the uterus cavity, endometrium and the fallopian tubes.
EPIDEMIOLOGY AETIOLOGY	**Intramural ectopic** is one of the rarest forms that happens less than 1% of ectopic pregnancies. Aetiology of intramural ectopic remains debatable. Several risk factors such as uterine surgery including dilation and curettage, previous cesarean section, or myomectomy may have a contributing role.
SYMPTOMS	In general, the classic triad of a suspected ectopic pregnancy include: abdominal and/or pelvic pain, vaginal bleeding, and a positive pregnancy test. Syncope or hypotension will raise further alert for possible ruptured ectopic.
DIAGNOSIS	Diagnosis of ectopic pregnancy is confirmed with serial ultrasound scans and serial serum hCG in the first trimester. From the literature, for intramural ectopic the diagnosis is usually a combination of transvaginal ultrasound, MRI, hysteroscopy and histopathology.
TREATMENT	For non-rupture ectopic pregnancy, expectant management, medical management with methotrexate, and surgical management are the current options. Ruptured ectopic is a medical emergency therefore surgery is always needed. Preserved fertility is varied with different cases.

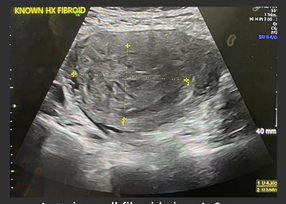
CASE REPORT

A 42 year old female G5P1 (previous Caesarean section) presented to emergency department with sudden onset abdominal pain at 15 weeks pregnancy.

HISTORY

- She was known to have an **anterior uterine fibroid**, awaiting surgery but postponed because of this unplanned pregnancy.
- Her first ultrasound scan at 8 weeks was **inconclusive** due to the large fibroid and increased BMI.
- The subsequent booking scan at 12 weeks reported intrauterine pregnancy.

Gestational sac and fetus heartbeat detected at 10 gestation's week.



Anterior wall fibroid size: 4x6cm

EMERGENCY PRESENTATION

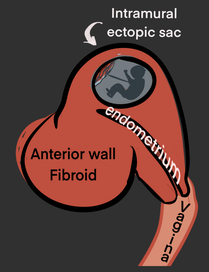
- Patient was in severe distress with tenderness all over her abdomen on slight movements and palpation. However she reports **no** vaginal bleeding or any pregnancy related symptoms.
- An informal bed-side ultrasound at the time revealed the known fibroid which obstruct the view significantly. Nevertheless, a single foetus was seen with active heart activity and a small amount of free fluid.
- Biochemistry blood results are reported all within normal range with no ongoing infection. Her Hb was stable at 13g/dL despite her pale looking appearance.

HOSPITALISATION EVENTS

- Despite escalation of analgesia, patient still suffered from persisted and worsened abdominal pain.
- A second set of blood test were repeated approximately 3 hours after admission; this time her Hb was noted to drop down to 8.5 g/dL while other biochemistry test remains unchanging.
- Consultation was made between specialties including surgical team, obstetrician team, medical team and anaesthetic team as patient started deteriorating with low BP of 70/40mmHg.
- A decision was made for emergency laparoscopy to identify cause of a suspected **internal bleeding**.

OPERATION FINDINGS

- As soon as the scope entered the abdominal cavity, hemoperitoneum was noted in abundance.
- The emergency laparoscopy procedure was converted to laparotomy the moment we identified foetus feet in the abdomen cavity with the first impression of uterine rupture.
- However, the placenta and remnant of sac was removed without entering the uterine cavity. Intramural ectopic rupture was then diagnosed during operation.



Schematic drawing of sagittal view of uterus depicting the location of intramural ectopic sac in relation to the anterior wall fibroid.
(Drawn by Dr Mai Khanh Kieu Xuan)

- The uterus was repaired and her fertility was preserved. Patient had massive blood loss of 5000 mls and she was continuously receiving blood transfusion while being operated .
- She was admitted to intensive care for 1 day and recovered well afterwards leading to discharge after 4 days.

DISCUSSION

The patient's moderate-sized fibroid have misguided the intramural pregnancy to look like an intrauterine one at the early stage. In addition, her lack of classical ectopic symptoms and the initial normal blood result can be deceiving. Therefore, our take home message which we learned from this case is:

- Despite the normal initial lab result, it is always sensible to reassess when patient's symptoms persist or worsen. Repeated investigations may be warranted for a proper monitoring from the re-assessment.

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2. Chen, Xiaoran et al. "Intramural Ectopic Pregnancy: Clinical Characteristics, Risk Factors for Uterine Rupture and Hysterectomy." Frontiers in medicine vol. 8 769627. 28 Oct. 2021, doi:10.3389/fmed.2021.769627