

Organized Tubal Ectopic Pregnancy Imitating a Pedunculated Myoma: A Diagnostic and Surgical Challenge (Case Report)

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Abstract: Background: Organized ectopic pregnancy can clinically and radiologically mimic benign pelvic masses such as pedunculated myomas, posing a diagnostic challenge. **Presentation:** A 30-year-old multiparous woman presented with two months of pelvic pain, menometrorrhagia, and amenorrhea. Imaging revealed a retro-uterine vascularized mass measuring 12x6 cm, with differential diagnoses including pedunculated myoma and ectopic pregnancy. **Management:** Exploratory laparotomy revealed a mass involving the right fallopian tube. Salpingectomy was performed, and histology confirmed a tubal ectopic pregnancy. Postoperative methotrexate was administered for residual trophoblastic implants. **Conclusion:** Ectopic pregnancy should be considered in reproductive-age women with atypical pelvic masses. Surgical exploration is often necessary when imaging is inconclusive.

Keywords: Ectopic pregnancy, Pedunculated myoma, Pelvic mass, Diagnostic dilemma, Salpingectomy, Trophoblastic tissue, Chronic pelvic pain, Methotrexate.

1. INTRODUCTION

Ectopic pregnancy, defined as implantation of a fertilized ovum outside the uterine cavity, remains a significant cause of maternal morbidity and mortality, particularly in the first trimester.

Most commonly occurring in the fallopian tubes, ectopic pregnancies may rupture or become organized and mimic other adnexal masses. Meanwhile, uterine fibroids, particularly pedunculated subserosal types, can present similarly on imaging, especially when degenerative changes are present.

The diagnosis becomes even more complex in the presence of overlapping clinical features, such as pelvic pain, menometrorrhagia, and amenorrhea, symptoms common to both conditions.

The following case explores this diagnostic conundrum and highlights the role of surgical exploration when imaging fails to clarify the nature of a pelvic mass. [1]

2. CLINICAL CASE

2.1 Patient history:

A 30-year-old multiparous woman, presented to the gynecology department with complaints of chronic pelvic pain and menometrorrhagia persisting for approximately two months.

Her menstrual history revealed secondary amenorrhea for the same duration.

She reported no fever, weight loss, or gastrointestinal or urinary symptoms. Her general condition was preserved, with no signs of systemic illness.

2.2 Clinical examination:

On physical examination, the patient was found to be stable hemodynamically and respiratorily.

Abdominal palpation was unremarkable.

Speculum examination revealed blood-streaked vaginal discharge, while bimanual vaginal examination revealed a firm, non-tender mass palpable through the posterior vaginal fornix.

2.3 Imaging findings:

A transvaginal pelvic ultrasound demonstrated a heterogeneous retro- and lateral-uterine mass measuring approximately 12 x 6 cm.

The mass displayed peripheral vascularization on Doppler imaging, described as a "ring of fire" appearance, typically suggestive of a gestational sac but also seen in some vascular myomas.

Given the diagnostic uncertainty, a contrast-enhanced pelvic CT scan was performed, which revealed a complex mass contiguous with the uterus and in proximity to both adnexa. (Fig. 1, Fig. 2)

Radiologically, the differential remained between a degenerated pedunculated myoma and an organized ectopic pregnancy.

No free fluid was observed in the pelvis.



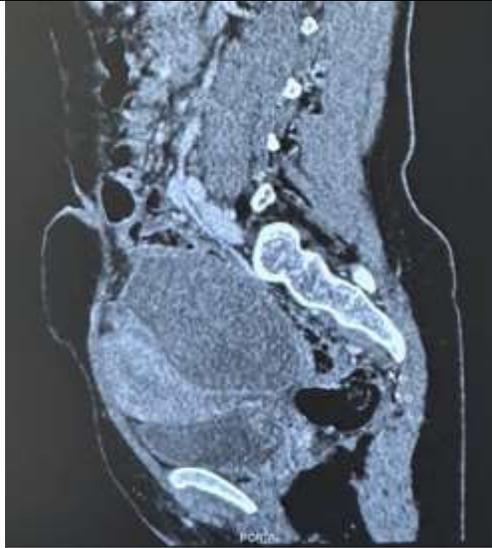


Fig1: Image showing a sagittal CT scan section of the lateral and retro-uterine formation.

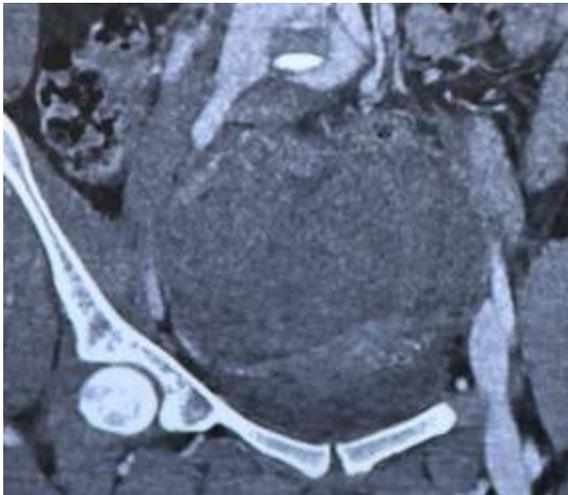


Fig2: Image showing a transverse CT scan section of the lateral and retro-uterine formation.

2.4 Surgical management: Laparotomy findings:

Due to persistent diagnostic ambiguity and the presence of a sizeable pelvic mass, an exploratory laparotomy was performed.

Intraoperatively, there was no hemoperitoneum.

A well-encapsulated mass was found on the right retro- and lateral-uterine region, in continuity with the uterine wall. (Fig. 3) The mass was adherent to both the right adnexa and the contralateral adnexa. The right fallopian tube appeared thickened and coiled and partially embedded within the mass. (Fig. 4, Fig. 6)

Careful adhesiolysis was performed to dissect the mass.

Upon incision of the mass, an organized hematoma was encountered along with membrane-like structures consistent with trophoblastic tissue. (Fig. 5)

Given the ongoing intraoperative bleeding and distorted anatomy (Fig. 6), a right salpingectomy was performed.

Additional inspection revealed residual trophoblastic implants on the pouch of Douglas and the serosal surface of the digestive tract. These findings warranted postoperative administration of methotrexate to address the remaining ectopic gestational tissue.



Fig3: Image showing the thick capsule of the mass.



Fig4: Image showing the tube buried within the mass.



Fig5: Image showing hemorrhagic suffusions inside the mass.



Fig6: Image showing the tubal swelling.

2.5 Histopathological analysis:

Histologic evaluation of the mass confirmed the presence of chorionic villi and trophoblastic tissue, consistent with a diagnosis of tubal pregnancy.

The fallopian tube showed hemorrhagic remodeling of the tubal mucosa but no malignancy or signs of chronic infection.

2.6 Postoperative course:

The patient had an uneventful postoperative recovery.

Methotrexate was administered intramuscularly in a single dose as per the institutional ectopic pregnancy protocol.

Beta-hCG levels were monitored postoperatively and showed a progressive decline.

At follow-up, the patient remained asymptomatic.

3. DISCUSSION

3.1 Differential diagnostic challenge:

The overlapping clinical and radiologic features of pelvic masses make the diagnosis particularly challenging. [1] In our case, the differential diagnosis included:

- **Pedunculated subserosal myoma:** Often presents as a firm, mobile mass with peripheral vascularity. Degenerative changes may give it a heterogeneous appearance on imaging.
- **Ovarian mass:** Although possible, the continuity with the uterus and embedding of the fallopian tube made this less likely.
- **Organized ectopic pregnancy:** When an ectopic gestation evolves into a chronic form, it may present with a fibrous capsule and hematoma, resembling a myoma or ovarian mass. [1,2]

Despite the classic "ring of fire" Doppler sign, typically associated with ectopic pregnancy, the imaging findings were inconclusive.

This highlights the limitations of imaging in certain cases and the importance of a high index of suspicion, particularly when the clinical picture suggests an ectopic pregnancy in a woman of reproductive age with amenorrhea. [2,3]

3.2 Management considerations:

While laparoscopy is the preferred approach in many ectopic pregnancies, the size of the mass and diagnostic uncertainty warranted an open approach.

Salpingectomy was necessary due to the extent of tubal involvement and ongoing bleeding.

Postoperative methotrexate was appropriately administered due to the presence of residual trophoblastic tissue. [3,4]

5. CONCLUSION

This case illustrates the diagnostic complexity posed by pelvic masses in women of reproductive age.

Organized ectopic pregnancy should remain a differential diagnosis in cases where imaging reveals a vascularized adnexal or retro-uterine mass, even in the absence of acute symptoms.

Surgical exploration remains a valuable diagnostic and therapeutic tool in such cases, especially when non-invasive methods fail to clarify the diagnosis. [4]

6. REFERENCES

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