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Case Report

Tubal ectopic pregnancy with molar changes: an uncommon histopathological finding

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ABSTRACT

Ectopic molar pregnancy is an uncommon form of gestational trophoblastic disease and is rarely suspected preoperatively due to its clinical similarity with non-molar ectopic pregnancy. We report a case of a 46-year-old multiparous woman presenting with amenorrhea, abdominal pain, and vaginal bleeding following unsupervised medical termination of pregnancy. Ultrasonography revealed a left adnexal mass suggestive of ectopic pregnancy. The patient underwent exploratory laparotomy with left salpingectomy. Histopathological examination demonstrated hydropic chorionic villi with trophoblastic proliferation, consistent with molar changes. Postoperative β-hCG levels showed an appropriate decline. This case highlights the importance of routine histopathological examination of ectopic pregnancy specimens, as definitive diagnosis cannot be established clinically. Early diagnosis is essential to ensure appropriate follow-up and to detect persistent gestational trophoblastic disease at an early stage.

Keywords: Ectopic pregnancy, Hydatidiform mole, Tubal mole, Histopathology, β-hCG

INTRODUCTION

Hydatidiform mole is a subtype of gestational trophoblastic disease arising from abnormal fertilization, characterized by hydropic changes in villi and excess trophoblastic proliferation. While molar changes in an intrauterine pregnancy are commonly encountered, ectopic molar pregnancy is exceedingly rare.

As clinical and radiological findings are non-specific, diagnosis can only be established by histopathological examination. This underscores the need for routine evaluation of all ectopic pregnancy specimens to ensure accurate identification and appropriate follow-up. Distinguishing true molar change from non-molar hydropic degeneration remains challenging, and adjunct immunohistochemical markers such as p57/p21 may aid in confirmation.[1]

CASE REPORT

A 46-year-old woman, gravida 4 para 3 living 3, with a history of three prior vaginal deliveries and known type 2 diabetes mellitus and hypothyroidism, presented to the gynaecology outpatient department with lower abdominal pain and two months of amenorrhea. She reported a positive home urine pregnancy test at around six weeks of amenorrhea, following which she self-administered an over-the-counter medical abortion regimen.

This was associated with minimal bleeding, after which she developed intermittent abdominal pain along with mild per-vaginal bleeding. She presented to the outpatient department. On general examination, the patient was in fair general condition and afebrile, with a pulse of 110/min (tachycardia) and a blood pressure of 100/60 mmHg. Abdominal examination revealed lower abdominal tenderness with guarding. Pelvic examination showed a

bulky, anteverted uterus with fullness and tenderness in the left fornix.

The patient had a history of 2 months of amenorrhea and obtained a positive urine pregnancy test approximately 6 weeks earlier. One day after confirming pregnancy, she self-administered medical termination pills, following which she developed abdominal pain and vaginal bleeding.

Diagnostic assessment

Her haemoglobin was 8.2 g/dl (anemic) and serum β-hCG levels measured on two occasions 24 hours apart were: Day 1: 16092.9 mIU/ml and Day 2: 14089 mIU/ml (the decline was only 12%; given the patient's persistent symptoms, surgical intervention was undertaken) Ultrasound showed a left adnexal heterogenous mass of 63×49×45 mm, no internal vascularity with minimal fluid in Pouch of Douglas. The provisional diagnosis for this case was chronic left tubal ectopic pregnancy.

Therapeutic intervention

Exploratory laparotomy was performed under general anaesthesia. Intraoperative findings were a normal uterus and right adnexa, chronic left tubal ectopic pregnancy (~6×5×5 cm) with minimal hemoperitoneum, corroborating with USG findings (Figure 1). Left salpingectomy with Right tubal ligation was done, and the specimen was sent for histopathological examination.

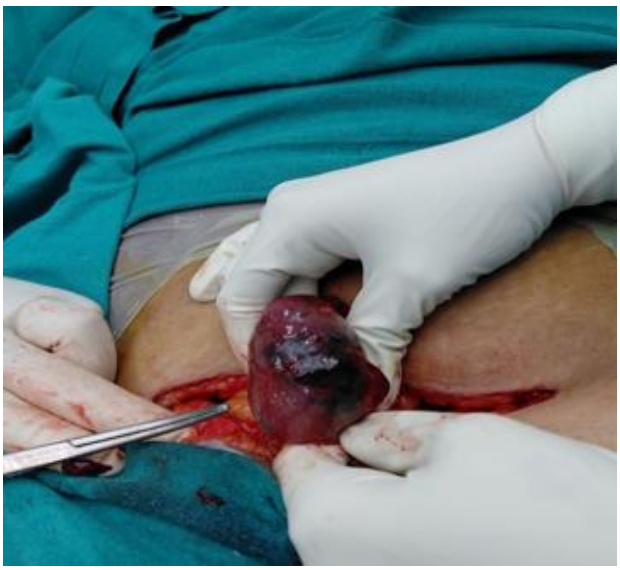

Figure 1: Operative images -left sided tube with ectopic pregnancy.

Histopathological findings

Hydropic degeneration of chorionic villi, trophoblastic proliferation, extensive hemorrhage and necrosis, which led to the diagnosis of tubal ectopic pregnancy with molar changes (Figures 2-4).

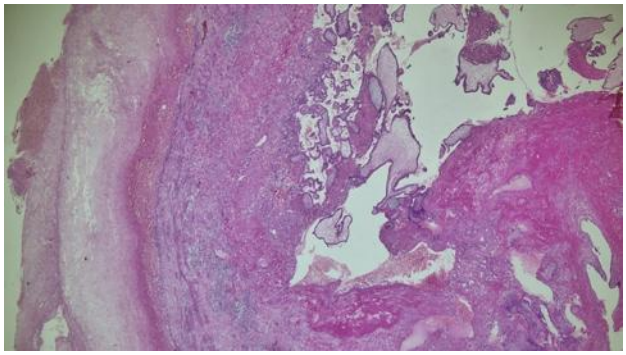

Figure 2: Histopathology image of left Fallopian tube showing thickened wall with extensive areas of haemorrhage and necrosis and lumen containing chorionic villi showing hydropic changes suggesting tubal ectopic molar pregnancy. (H and E stain, 4x magnification).

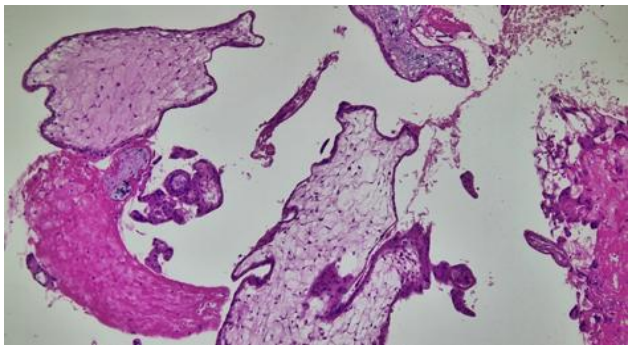

Figure 3: Chorionic villi showing hydropic changes, lined by cytotrophoblasts and syncytiotrophoblasts suggesting partial molar changes (H and E stain, 10x magnification).

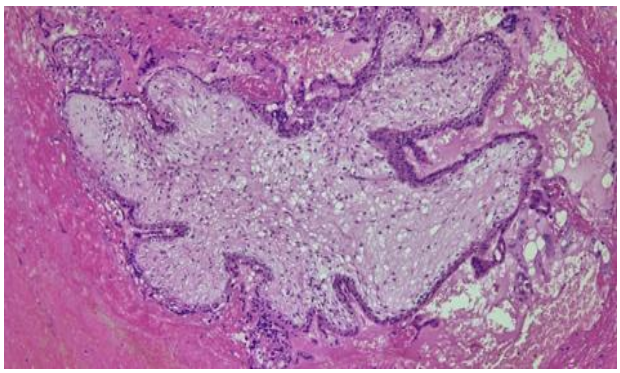

Figure 4: Chorionic villi within wall of Fallopian tube showing hydropic changes, lined by cytotrophoblasts and syncytiotrophoblasts suggesting partial mole. Note extensive haemorrhage and necrosis (H and E stain, 40x magnification).

Follow up and outcomes

Patient had uneventful postoperative recovery, Serum β-hCG declined to 8.22 mIU/ml postoperatively indicating adequate removal of trophoblastic tissue. She was advised

for Serial β-hCG monitoring, post operative β-hCG was <2.5mIU/ml on three subsequent follow-up visits. Follow-up was done to rule out persistent GTD.

DISCUSSION

Hydatidiform moles, including both complete and partial forms, occur in approximately 1 in 500–1000 pregnancies. While molar changes in an intrauterine pregnancy are commonly encountered, ectopic molar pregnancy is exceedingly uncommon and is often indistinguishable from non-molar ectopic pregnancies on clinical grounds.

A review by Vuong et al demonstrated that the clinical presentation and initial management of molar ectopic pregnancies are similar to those of non-molar ectopic pregnancies, with treatment largely guided by serum β-hCG levels. However, a subset of cases required chemotherapy, underscoring the importance of accurate histopathological diagnosis. The authors also emphasized the need for effective contraception and deferral of future conception until β-hCG normalization to differentiate persistent disease from a new pregnancy.[2] Similar observations have been reported by Ayyash et al who highlighted that histopathological examination plays a key role in guiding postoperative surveillance and counselling, given the risk of progression to gestational trophoblastic disease. Regular follow-up with serial β-hCG monitoring remains essential for early detection of persistent disease.[3]

Other authors, including Radhakrishnan et al and Hajisafari Tafti et al have reiterated the rarity of this entity and the difficulty in distinguishing molar from non-molar ectopic pregnancies based on clinical or biochemical parameters alone. Although markedly elevated β-hCG levels may raise suspicion, definitive diagnosis depends on histopathological evaluation.[4,5]

Mashruwala et al further demonstrated that even in atypical locations such as ovarian ectopic pregnancies, differentiation relies on tissue diagnosis, with continued β-hCG surveillance until normalization.[6] Mbarki et al observed that while clinical features are comparable, tubal rupture may occur earlier in molar ectopic pregnancies. They also suggested that adjunct techniques such as DNA flow cytometry may help reduce overdiagnosis when used alongside histological assessment.[7]

A case reported by Patil N et al demonstrated that tubal molar pregnancy could be suspected on ultrasonography. It was later confirmed on histopathological examination, supported by markedly raised β-hCG levels. However, in routine clinical practice, diagnosis may not be apparent on imaging or gross examination of the specimen. This can create diagnostic uncertainty, especially in rare presentations like ectopic molar pregnancy. Our case reinforces that relying only on clinical or radiological findings may lead to missed diagnoses. Therefore, histopathology, supported by ancillary tests when required, is essential for confirming the diagnosis, assessing malignant potential, and guiding postoperative surveillance.[8] Currently, the role of ultrasonography in differentiating tubal molar pregnancy from a non-molar ectopic pregnancy remains limited, as no established diagnostic criteria exist, although isolated reports have described its supportive role in suggesting the diagnosis.[9]

Recent case reports suggest that magnetic resonance imaging (MRI) may improve diagnostic accuracy in stable patients by better identifying molar tissue and associated vascularity. However, its routine use in ectopic pregnancy remains limited due to cost and low practical utility.[10]

Tubal molar pregnancy was first described by Otto in 1871. Complete removal of trophoblastic tissue is essential, as ectopic molar pregnancy carries a risk of persistent gestational trophoblastic disease and malignant transformation, similar to intrauterine molar pregnancy. Therefore, postoperative follow-up with serial β-hCG monitoring, counselling, and contraception is mandatory.[11-14]

CONCLUSION

Although ectopic molar pregnancy is rare, it often presents like a routine ectopic pregnancy and is initially managed similarly. However, further management and follow-up depend on the final histopathological diagnosis. Therefore, histopathology, supported by additional tests when needed, is essential to confirm the diagnosis, assess malignant potential, and guide postoperative surveillance.

Overall, these findings highlight that histopathological examination remains central to diagnosis and management. In cases with equivocal features, immunohistochemical markers such as p57 (and, in selected settings, p21) may assist in confirming molar pathology, thereby enabling appropriate follow-up and improving clinical outcomes.

A limitation of this case was the inability to perform p57/p21 immunohistochemistry because these tests were not available at our centre. Their use might have offered additional diagnostic confidence in confirming the ectopic molar pathology.

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