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CASE REPORT

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Partial mole in ectopic pregnancy

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Abstract *Objective*: To evaluate the incidence of molar pregnancy in the fallopian tube pregnancy. *Setting*: Outpatient clinic. *Patient*: 32-year-old Asian woman. *Intervention*: Left salpingectomy. *Outcome*: Molar ectopic pregnancy. *Result*: Ectopic partial mole pregnancy. *Conclusion*: Molar pregnancy can occur in ectopic pregnancy. Clinically, molar pregnancy mimics normal tubal ectopic pregnancy.

Keywords Tubal ectopic pregnancy · Molar pregnancy

Case report

A 32-year-old Asian woman with four children was referred to the early pregnancy unit in January 2005. She was 11 weeks pregnant and was having vaginal bleeding that had started 7 days before admission and had included the passing of clots, which had settled. She had no associated pelvic or shoulder pain. Her past medical and surgical history was not significant. She was not a smoker and had no allergies.

On examination her pulse was 88, blood pressure 120/68, and temperature 36.9ºC. High vaginal and chlamydia swabs were taken. The chest examination was clear, and the heart examination showed S1, S2. Abdominal examination showed tenderness over the left iliac fossa with no guarding or rigidity. The vulva was smeared with blood, and there was brown blood in the vagina. Internal examination revealed a bulky anteverted uterus with no adnexal masses. No tenderness over the pelvic area or cervical excitation could be identified.

The pregnancy test in the hospital was positive. An ultrasound scan was arranged, which showed a bulky anteverted uterus with thin (4 mm) endometrium. No evidence of intrauterine pregnancy was seen, and both ovaries appeared normal. In the left adnexa there was a 44×25×38-mm complex mass. It appeared to be in the fallopian tube, and there was also a hydrosalpinx at the medial section. No free fluid was identified. The findings were consistent with ectopic pregnancy. The patient's beta human chorionic gonadotropin (BHCG) level on the day of admission was 12,894 U/l, and her haemoglobin level was 13 g/dl. She was RH-positive.

A diagnosis of left tubal pregnancy was made, and the patient was prepared for surgery on the same day of admission. She was grouped and saved, and a diagnostic laparoscopy was done. Both ovaries and the right tube were normal, but a left tubal pregnancy could be seen actively bleeding in the tube. Laparotomy was performed, and the laparoscopic findings were confirmed. The left tube was found to be ruptured. A left salpingectomy was done and the specimen sent to histopathology. The patient recovered uneventfully and was discharged home on the 3rd day after admission. Her haemoglobin level on discharge was 10.3 g/dl. The swab results came back positive only for *Candida*, and the patient's general practitioner was informed.

The histopathology report suggested partial hydatidiform mole of ectopic pregnancy (Fig. 1). Therefore, the patient was notified to be seen in the gynaecology clinic 6 weeks from the procedure for follow-up of the partial molar pregnancy. She was advised to refrain from getting pregnant until her HCG levels had been normal for 6 months. She was also advised to avoid using the hormonal pill for contraception and to use barrier methods instead. The follow-up plan was for weekly urine samples until normal levels were achieved, followed by fortnightly and then monthly levels for 1 year, with a serum sample 3 months following the date of the original procedure.

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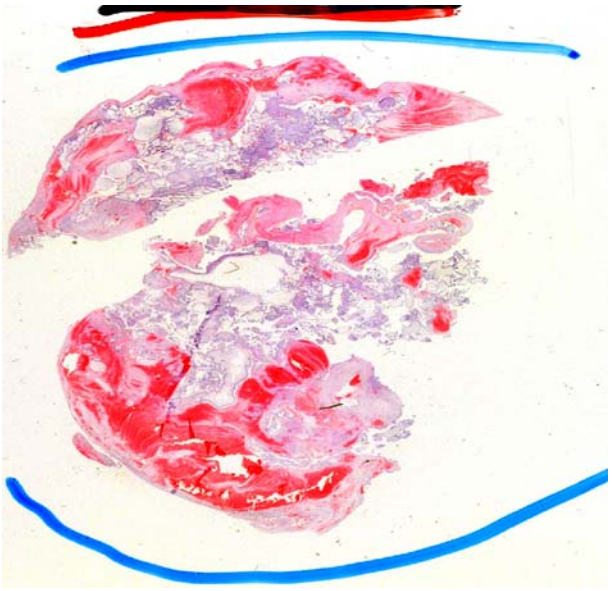

Fig. 1 Partial hydatidiform mole of ectopic pregnancy

Results and discussion

Hydatidiform moles are abnormal gestations characterised by the presence of hydropic changes affecting some or all of the placental villi associated with circumferential proliferation of trophoblast tissue [1]. They arise due to abnormal fertilisation. In a complete mole, the chromosomal component is 46XX, with a genome that is entirely paternal in origin [1, 2]. This usually occurs when an empty ovum is fertilised by a haploid spermatozoon, which subsequently duplicates. Occasionally, cases can occur by fertilisation with two sperm [3]. In contrast, a partial mole arises from dispermic fertilisation of a haploid ovum, resulting in a triploid genome [4].

Partial or complete hydatidiform mole affects approximately one in 500–1,000 pregnancies [5]. On theoretical grounds, a similar proportion of ectopic pregnancies should also be complicated by molar changes, as the underlying abnormality preceding both partial and complete hydatidiform moles is an abnormal androgenic chromosomal constitution of the conceptus, which is therefore present before the implantation regardless of the implantation site [6].

It is clinically important to distinguish molar pregnancy from nonmolar hydropic changes because the former can cause persistent trophoblastic disease. Furthermore, the blighted ovum is a common feature in ectopic pregnancy and can easily be misinterpreted as a true hydatidiform mole [7].

Another significant complication that has been mentioned in the literature is the ability of the tubal molar pregnancy to produce metastasis to distant organs. Pulmonary metastasis has been found in a patient with mole of the fallopian tube coexisting with intrauterine pregnancy. This was successfully treated with Actinomycin D [8].

Some papers in the literature have emphasised the rarity of ectopic molar pregnancies, whereas others have stated that the condition is overdiagnosed. A paper from France published in 1995 showed that there were only two cases of hydatidiform mole seen in a 16-year period. The uncommon frequency of this pathology is difficult to state precisely. This can be due to the limited possibilities of the diagnosis. These are inherent to the lack of statement of ectopic pregnancy, a nonsystematic histological test [9]. Anecdotal data from Charing Cross Hospital, which is one of the three major tertiary centres that deal with molar pregnancies in the United Kingdom, suggest that there is difficulty interpreting the findings in ectopic pregnancies. Indeed, more ectopic pregnancies than uterine pregnancies are locally overdiagnosed as hydatidiform mole, with only 15% of referrals being confirmed as molar in one series.

Only 40 cases of tubal ectopic hydatidiform mole have been reported in the world literature. Although rare, all such specimens require appropriate histologic identification for follow-up and counselling.

In a review of all cases referred to Charing Cross Hospital between 1986 and 2004 with a diagnosis of possible hydatidiform mole in a tubal pregnancy, only two cases of 132 were found to be ectopic partial mole. In five cases, the final diagnosis was ectopic complete mole, and one case was nonspecified ectopic molar pregnancy. Therefore, eight cases (6%) of possible molar pregnancy in ectopic conception had a final diagnosis of definite hydatidiform mole. None of the cases in this series developed persistent gestational trophoblastic disease, and HCG concentrations spontaneously returned to normal during surveillance in all cases of confirmed diagnosis of hydatidiform mole.

Therefore, strict criteria should be established to avoid overdiagnosing molar pregnancy and inappropriately exposing patients to chemotherapy agents.

The most important diagnostic feature is the presence of definite abnormal, nonpolar trophoblast proliferation that is circumferential in nature, often demonstrating a vacuolated phenotype, and which may be associated with sheets of pleomorphic extravillus trophoblast fragments [10, 11]. Immunohistochemical markers such as P57KIP2, which has been recently described, can also be useful for diagnosing early moles, even on the basis of minimal tissue, because this protein is not expressed in the villus trophoblast or the stroma of complete hydatidiform moles [12]. Histologic discrimination between partial mole, complete mole, and hydropic abortion can be a challenge to the histopathologist; therefore, ploidy identification by flow cytometric DNA analysis helps in the differential diagnosis between diploid and triploid moles. It does not help distinguish complete mole from hydropic abortion.

Although BHCG levels are elevated in tubal molar pregnancies, they are generally in the lower range because implantation in the fallopian tube might preclude adequate vascularisation, thereby leading to low HCG levels. There is no distinctive difference in BHCG levels between molar tubal pregnancies and ectopic pregnancy. Thus, an early ectopic molar pregnancy is not distinguishable from a nontrophoblastic tubal pregnancy on the basis of HCG levels [13].

The risk of persistent trophoblastic disease is no greater than after uterine molar gestations, approximately 0.5% for partial mole and 15% for complete [14]. The diagnosis of apparently primary tubal choriocarcinoma with no confirmed previous ectopic hydatidiform mole is now well reported but poses no specific histopathologic diagnostic problem because the features are identical to choriocarcinoma at other sites [15, 16]. In many such cases, metastatic disease may be present at diagnosis, but it remains unclear in what proportion of cases the choriocarcinoma may have developed from a previous unrecognised tubal mole or whether some cases may represent seeding from a uterine primary conception. The prognosis of choriocarcinoma is better when in the tube than in the uterus, because molar pregnancy in the tube is removed and not left intact as in the uterus [17].

Ectopic pregnancies that are managed surgically should be submitted for histopathologic examination, and the pathologist should be aware that the degree of extravillus trophoblastic proliferation may appear more than that normally seen in the evacuated uterine products of conception. Hydatidiform molar pregnancies should be diagnosed only when strict criteria regarding morphologic abnormalities have been previously described. Because no tissue diagnosis is available in tubal pregnancies that are managed nonsurgically, follow-up with BHCG monitoring to ensure a return to normal levels is recommended.

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