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Ectopic Pregnancy With Partial Molar Degeneration: A Rare Case Report.

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ABSTRACT

Gestational trophoblastic disease (GTD) represents a spectrum of histologically distinct entities including molar pregnancy and choriocarcinoma. The incidence of gestational trophoblastic disease varies in different parts of the world. With the advent of sensitive assays for detection of serum beta human chorionic gonadotrophin (HCG) and ultrasound, gestational trophoblastic disease can now be detected earlier in pregnancy. There have only been a small number of molar ectopic pregnancies reported in the literature with estimates of incidence being around 1.5 in every 1,000,000 pregnancies. It is pertinent that clinicians take routine histological examination of tubal specimens in ectopic pregnancy very seriously in order to diagnose cases of ectopic molar gestations early and decide on appropriate post treatment surveillance.

Keywords: partial molar, beta-hcg, hydatidiform mole, Fluorescent in situ hybridisation

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INTRODUCTION

Hydatidiform mole (HM) is a form of gestational trophoblastic disease that occurs due to abnormal degenerative changes in chorionic villi and abnormal proliferation of trophoblastic tissue.

There are two types of Hydatidiform mole: complete and partial, and are differentiated based on clinical presentation, chromosomal pattern, histology and outcome.

Partial Hydatidiform Mole, occurs when the ovum is fertilized by either two sperm or one diploid sperm causing a triploid mole (69XXX, 69XXY, or 69XYY). Partial Hydatidiform mole may be associated with a fetus, even allowing for a detection of fetal cardiac activity in some cases. This, along with its rarity, can make ectopic hydatidiform mole a difficult diagnosis, consequently causing it to be overlooked for simple ectopic.

While ectopic pregnancy and molar pregnancy are not rare events (approximately 20 in every 100 and 1 in every 500 to 1000 pregnancies), the combination of the two, an ectopic Hydatidiform Mole, is an extremely rare event. There have only been a small number of molar ectopic pregnancies reported in the literature with estimates of incidence being around 1.5 in every 1,000,000 pregnancies.

CASE REPORT

A 40 years old Gravida 4 Para 2 Live 2 abortion 1 with 1st normal vaginal delivery and 2nd LSCS with sterilisation with previous regular cycles came with complaints of bleeding per vaginum preceded by amenorrhea of 9 weeks and brownish vaginal discharge since 2 days, Urine pregnancy test came positive on 22/9/19, consulted outside and was advised for ultrasonography on 24/9/19-normal findings with Et-12mm with no intrauterine gestational sac and serum Beta-human chorionic gonadotrophin on 25/9/19-1200mIU/ml & was advised to review after 2 weeks. The patient came with the USG report done on 09/10/19 showing- Right Ovary shows a heterogenous cystic spaces with prominent stroma & measures-4.8x4.0cm with increased vascularity, no evidence of free fluid in the pelvis and beta-hcg levels were monitored pre-operatively. (table1)

The other blood parameters were unremarkable. Her past surgical history was remarkable for Laparoscopic Cholecystectomy done 8 years back.

The patient came with complaints of bleeding per vaginum, with no abdominal pain and hemodynamically stable with abdomen soft and non tender and on per vaginum examination- cervix soft, uterus-size could not be assessed due to obese abdomen, mass felt in the right adnexa which was tender and cervical motion tenderness present. Given the history and ultrasound findings of adnexal mass and no evidence of gestational sac and elevated levels of beta-human chorionic gonadotrophin, most likely diagnosis is ectopic pregnancy.

The patient was not willing for conservative management and consented for Laparoscopy with Right sided Salpingectomy, if needed Salpingo-oophorectomy and Endometrial sampling.

Laparoscopic entry was uncomplicated. A 3x3cm adnexal mass was visualised adherent to Right Ovary being-? Right tubal ectopic /? Right ovarian ectopic, proceeded with Right salpingo-oophorectomy & sample was sent for histopathology

Left sided evidence of tubal sterilization present.

The postoperative period was uneventful.

The histopathology findings revealed ectopic tubal gestation with partial molar degeneration & endometrial sampling showing secretory endometrium with Arias Stella reaction.(figure 2)

Given these findings the patient was observed closely with serial beta-human chorionic gonadotrophin levels monitoring; beta hcg was zero one month following surgery. (table 2)

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Table-1- pre-operative beta-hcg values

	25/9/19	09/10/19
Beta-hcg (mIU/ml)	1200	4332

Table-2-post-operative beta-hcg values

Date	beta-hcg(ml/IU)
23/10/19	212
26/10/19	86
30/10/19	4.23
23/11/19	0.48
23/12/19	0.26
01/01/20	<0.1

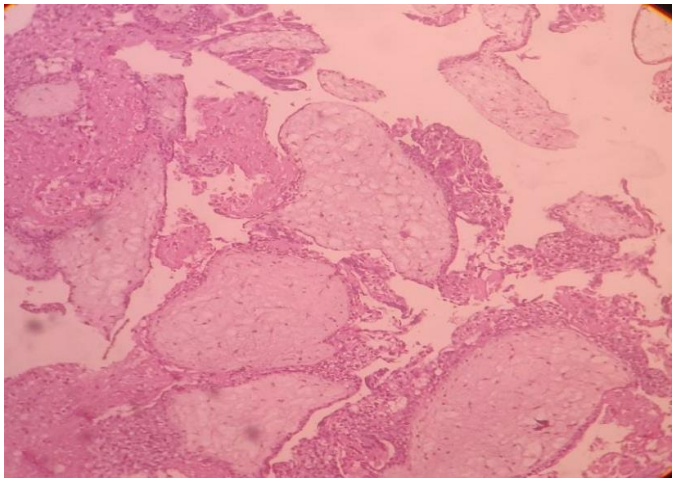

Figure 1: Cystically Dilated Chorionic Villi With Proliferative Trophoblastic Tissue

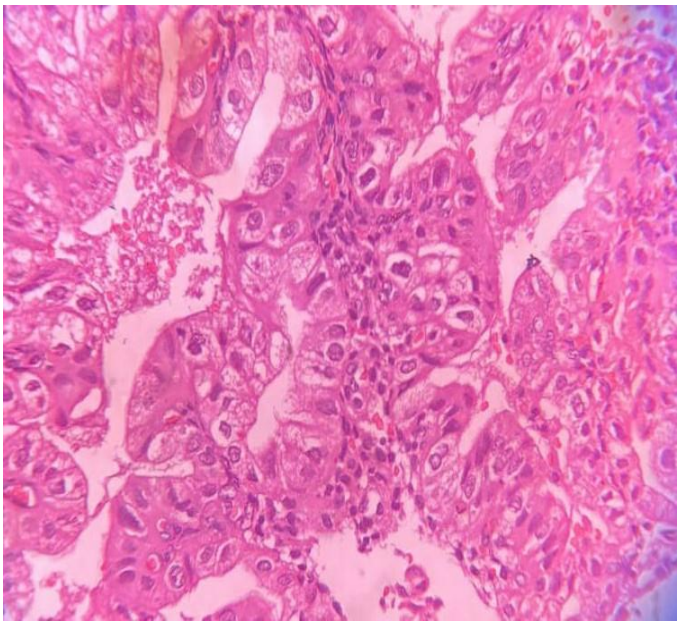

Figure 2: Secretory Endometrium With Arias Stella Reaction

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DISCUSSION

Hydatidiform mole is basically an abnormal conceptus, due to abnormal fertilization which can be sub-classified into complete and partial mole.

In a complete mole, the chromosomal complement is 46,XX or 46,XY with the genome paternal in origin. This is usually caused by fertilization of an empty ovum by a haploid spermatozoon, which subsequently duplicates. Occasionally cases occur by fertilization with two sperm. In contrast, partial moles arise from dispermic fertilization of a haploid ovum, resulting in a triploid genome.

The Risk factors for HM are not as clearly defined as for ectopic, but a surgical procedure, tubal sterilization by virtue of reanastomosis may end up in partial stenosis favouring ectopic pregnancy.

The complications pertaining to our case are haemoperitoneum and persistent trophoblastic tissue.

Haemoperitoneum was avoided as the patient was diagnosed and intervened in early gestation.

Persistent trophoblastic tissue is less likely to occur in my case as the patient has undergone right sided salpingo-oophorectomy.

The diagnosis of Hydatidiform mole may be confused by nonmolar hydrotropic villi changes seen in nonmolar ectopic pregnancies. Careful consideration should be used in distinguishing the two, as Hydatidiform mole has the potential to cause persistent trophoblastic disease and requires careful follow-up and monitoring. The use of DNA flow cytometry has sometimes been used as a complement to histological diagnosis.

Histologically, molar pregnancy is an abnormal gestation characterized by the presence of hydropic change affecting some or all of the placental villi, accompanied by circumferential proliferation of trophoblasts.(figure-1)

Nonmolar hydropic abortions are common; it is clinically important to distinguish molar pregnancies from non molar hydropic changes, because the molar pregnancies has the potential of causing persistent trophoblastic disease.

Furthermore, the blighted ovum is a common feature in ectopic pregnancy and can easily be misinterpreted as a true hydatidiform mole. However, the early swellings of the placental villi do not constitute a true hydatidiform mole.

There is no distinctive difference in beta–human chorionic gonadotrophin levels between molar tubal pregnancies and non-molar ectopic pregnancy. Thus, an early ectopic molar pregnancy is not distinguishable from a non molar tubal pregnancy on the basis of human chorionic gonadotrophin levels.

A number of techniques have been used to characterise the genetic status of product of conception and can be used as an adjunct in cases with difficult histological evaluation.

Chromosome analysis (karyotyping) examines all 46 chromosomes and has been considered the principal investigation for causes of pregnancy loss for several decades.

Fluorescent in situ hybridisation (FISH) uses fluorescently tagged probes to visualise specific DNA segments and has also been applied more recently, however only a limited number of chromosomes (five) are typically examined.

Later molecular techniques that can identify chromosome aneuploidy have included multiplex ligation-dependent probe amplification (MLPA), microarray comparative genomic hybridization, or whole genome single nucleotide polymorphism microarray. DNA ploidy analysis can also be performed by flow cytometry. In contrast to multiplex ligation-dependent probe amplification (MLPA) and microarray comparative genomic hybridization , triploidy (3n) and diploidy (2n) moles can be distinguished by karyotyping, Fluorescent in situ hybridisation (FISH) and flow cytometry, however none of these techniques can determine parental origin of the

chromosomes and distinguish between a complete hydatidiform mole and a non-molar abortus. Alternatively, genotyping using short tandem repeats microsatellite polymorphisms, or whole genome single nucleotide polymorphism microarray, can determine chromosome parental origin.

Gestational choriocarcinoma associated with ectopic pregnancy is extremely rare event: its theoretic incidence is 1 in 5033 tubal pregnancies. The prognosis of choriocarcinoma is better in the tube than in the uterus.

CONCLUSION

Ectopic molar pregnancy remains a very rare occurrence, thus making it an often overlooked diagnosis. An ectopic hydatidiform mole will mimic a classical ectopic getstation so the diagnosis should be made through histopathology and other molecular techniques as and when required.

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