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Incidence of Molar Pregnency on Histopathological Examination- A Retrospective Study.

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ABSTRACT

Background: Hydatidiform mole is an abnormal gestation characterized by trophoblastic hyperplasia and overgrowth of placental villi. H. mole is classified as complete (CHM) and partial (PHM). The diagnosis is based on histopathology and genetic origin. In our set up, we used only histopathological diagnostic criteria. The incidence of molar pregnancy varies in different parts of the world. Objective of the present study was to determine the frequency, clinical presentation and morphological features of H. mole and compare them with those of other studies. Objectives: The aim of this population-based retrospective study was to evaluate the trend in the incidence of molar pregnancy. The reported incidence of GTD in India is in consistent therefore we planned to do an analysis of the GTD at our institute which is a referral tertiary center of Punjab. **Methods:** Records of patients of GTD admitted from Dec 2016 to March 2018 were analyzed and incidence was calculated. The diagnosis of hydatidiform mole was based on the post-operative morphological and/or pathological findings. A total of 150 cases of retained products of conception received in the department of pathology were analysed. **Results:** Out of total 16 cases of molar pregnancy 5 were diagnosed as complete mole and 11 were diagnosed as partial mole. Out of 5 cases of complete mole, one case was of recurrent molar pregnancy. **Conclusion:** There is a need to look further about the association of age with molar pregnancies in future studies.

Keywords: Molar pregnancy-Complete mole, Partial mole.

INTRODUCTION

Gestational trophoblastic disease (GTD) includes the molar pregnancies which are benign forms with malignant potential and the malignant forms which are collectively known as gestational trophoblastic neoplasia (GTN). Molar pregnancies are either complete mole or a partial mole and GTN includes four pathological types namely choriocarcinoma, invasive mole, placental site trophoblastic tumour (PSTT) and epitheloid trophoblastic tumor (ETT). The reported incidence of GTD varies widely worldwide, from a low of 23 per 100,000 pregnancies (Paraguay) to a high of 1,299 per 100,000 pregnancies (Indonesia).[1]

The need for chemotherapy following a complete mole is 15% and after a partial mole is 0.5 %. The development of postpartum GTN requiring chemotherapy occurs at a rate of 1/50 000 births.[2]

An ectopic pregnancy (EP) refers to the implantation of an embryo outside of the uterus. Due to advances in laboratory testing, transvaginal ultrasound, chemotherapy and laparoscopy, the evaluation, diagnosis and management of EP has rapidly evolved. In parallel, maternal mortality has declined, from 3.5 of 10,000 pregnancies in 1970 to 2.6 of 10,000 in 1992.[3]

The most common EP location is in the fallopian tube, predominantly the ampullary region of the fallopian tube. Implantation outside the fallopian tube—in the cervix, ovary, myometrium, abdominal cavity, interstitial (i.e., intramuscular/proximal) portion of the fallopian tube or coincidentally with an intrauterine pregnancy—occurs in less than 10 % of EPs.[4]

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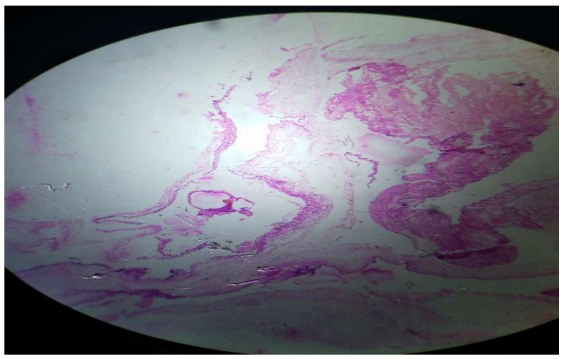

Figure 1: Photomicrograph showing hydropic villi with cistern formation and minimal trophoblastic proliferation.

The overall rate of EP is 1–2 % in the general population, and 2–5 % among patients who have utilized assisted reproductive technology (ART). Up to 50 % of women diagnosed with EPs have no identifiable risk factors; however, a number of risk factors have been associated with EP.[5] These include age, smoking, history of EP, tubal surgery or tubal damage, prior pelvic infection, DES exposure, IUD use and pregnancy conceived by assisted reproduction.[5]

MATERIALS AND METHODS

The case records of all these patients with molar pregnancy were analysed regarding age of patients, gestational age, symptoms and histopathology. All patients having molar pregnancy with elevated β-HCG levels, histopathological evidence of the disease were included in the study. The histological diagnosis was attempted in all cases, even when material was scanty.

One hundred and fifty cases of ectopic pregnancies managed at Rajindra Hospital GMC Patiala between Dec 2016 and March 2018 were analyzed. Clinical and socio-biological information were retrieved from patients' case notes, and supplemented by information from the operating theatre and ward registers.

RESULTS

Table 1: This table depicts the incidence of underlying causes in patients presenting with symptoms of pain abdomen/BPV.

Rpoc	105(70%)
Ectopic Pregnancy	29(19.3%)
Partial Mole	11(7.3%)
Complete Mole	5(3.3%)

Table 2: This table depicts the type of molar pregnancy in 150 cases

Complete Mole	5(3.3%)
Partial Mole	11(7.3%)

Out of total 16 cases of molar pregnancy 5 were diagnosed as complete mole and 11 were diagnosed as partial mole. Out of 5 cases of complete mole, one case was of recurrent molar pregnancy.

Table 3: This table depicts the age wise distribution of cases diagnosed as complete mole.

Age Group	Complete Mole
<20	1
20-30	4

Table 4: This table depicts the age wise distribution of cases diagnosed as partial mole.

Age Group	Partial Mole
<20	1
20-25	2
26-30	5
>30	3

DISCUSSION

In the present study, out of 150 cases noted, 5 cases were labelled as complete mole, 11 cases were labelled as partial mole .Therefore the frequency of complete moles was 3.3%.The frequency of partial mole turned out to be 7.3%.

Jaffer in his study of 60 cases of molar pregnancy also reported that frequency of CHM was higher as compared to PHM. Maternal reproductive age is the most important risk factor for H. mole in every region and ethnic group. In this study, disease was more common at extremes of reproductive ages with highest frequency seen in women of more than 35 years of age group (44%) and less than 20 years of age group (34%).[6]

A study conducted in Tertiary Care Hospital in Quetta,noted that 85 patients (0.51%) were diagnosed with a molar pregnancy from a total of 16,625 patients admitted to the institution. This translates into an incidence of ~5.1 per 1,000 patients admitted to the institution.[7]

Gestational trophoblastic disease has a wide variation worldwide in the incidence based on ethnic and geographic factors. In India there is paucity of data on GTD because of poor record maintenance at the government as well as private health facilities and absence of special centers dedicated to GTD patients. The incidence of H. mole is 1 in 1500 in USA, 1 in 1000 in Europe, 2 in 1000 in southeast Asian countries and Japan and 1 in 125 in Taiwan.[8,9]

In our study, out of 5 cases of complete mole ,4 cases recorded were in the age of 20-30 yrs.

Out of 11 cases of partial mole, maximum incidence was noted in the age group of 26-30 yrs (5 cases).

While in a study Agrawal et al concluded that, more than one third of the patients were in the age group of 20–35 years with a range of 16–51 and mean age of 23.7 years. Prevalence of molar pregnancy was found to be higher in women younger than 29 years (80 %) in another 8 year retrospective study done in Kathmandu.[10] In other studies, it has been found that there is a relationship between risk of molar pregnancy and both upper and lower extremes of maternal age. Furthermore, the extent of risk is much greater with older rather than younger maternal ages, and it is only at the true extremes of maternal age (15 and 45 years) that the increase in risk sharply rises.[11]

CONCLUSION

There is a need to look further about the association of age with molar pregnancies in future studies.

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