Prevalence of molar pregnancy (a three year retrospective study) in a tertiary care hospital

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Keywords: Hydatidiform Mole, Trophoblastic Hyperplasia, Cisterns.

ABSTRACT

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. The malignant potential of the disease is higher in South East Asia as compared to western countries. 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. This is a 3 year retrospective descriptive case series conducted in the Department of Pathology, SKIMS Medical College, Bemina from 31st December 2011 to 31st December 2014. The case records of all the molar pregnancies during the study period were analysed regarding patient’s history, clinical presentation and morphological features. A total of 50 cases were examined during the study period which included 38 cases of complete mole and 11 cases of partial mole. One case was labeled as complete mole with atypical trophoblastic proliferation. Frequency of CHM was higher as compared to partial mole. The disease was common in extremes of ages. A number of histopathological diagnostic criterias are used to distinguish CHM from PHM. We concluded that there is no single criterion to differentiate CHM from PHM.

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Introduction
Molar pregnancies represent a significant burden of disease on the spectrum of gestational trophoblastic disease. The incidence appears to be higher in women from South Asia including a trend towards recurrent molar pregnancies. H. mole is an abnormal gestation characterized by trophoblastic hyperplasia and overgrowth of placental villi. H. mole is classified as complete and partial hydatidiform mole. The diagnosis is based on histopathology and genetic origin. Accurate diagnosis and classification of H. mole is important as the risk of persistent gestational trophoblastic disease including choriocarcinoma is significantly high. The risk of choriocarcinoma in CHM is 10-30% and in PHM is 0.5%-5%.

Materials and Methods
This retrospective, descriptive case study was conducted at the Department of Pathology, SKIMS Medical College, Bemina from 31st December, 2014 to 31st December, 2011. 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 criteria for the diagnosis of CHM and PHM were those of Szulman and Surti. Histological diagnosis was attempted in all cases, even when material was scanty. The following features were graded-(1) Hyperplasia of trophoblasts; diffuse (perivillous,circumferential); focal(perivillous,multifocal); absent. (2) Cistern:present ;absent.(3) Pseudoinclusions of placental site trophoblastic proliferation. Therefore the frequency of complete moles 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%).

Result
A total of 50 cases were identified during the study period.

Discussion
A hydatidiform mole is a pregnancy in which the placenta contains grape like vesicles that are visible to the naked eye. The vesicles arise by the hydropic change within the chorionic villi which are seen as trophoblastic hyperplasia. The diagnosis of hydatidiform mole is clinically important because of its potential to give rise to persistent gestational trophoblastic disease including invasive mole, choriocarcinoma and placental site trophoblastic tumour. Furthermore, the distinction between complete and partial mole is also significant. In the present study, out of 50 cases noted, 38 cases were labeled as complete mole, 11 cases were labeled as partial mole and one case was labeled as complete mole with atypical trophoblastic proliferation. Therefore the frequency of complete moles was 76%. 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%). It is consistent with the findings of studies of Nizami and Jaffer. The available evidence suggests that H. mole arises as a consequence of defective ova. It is premature in young and postmature in old ages. Gestational age was also noted in the present study. Maximum number of patients approximately 52% presented during 2-5 months of gestational age i.e during first and mid second trimester. Koirala in his study of 64 cases reported 2nd trimester as the most common period of presentation. This is probably due to increase in gynaecological, sonographic and genetic factors contributing completion of gestational age 13.

| TABLE 1: This table depicts the types of molar pregnancy seen in 50 cases. |
|-----------------------------|------------------|
| Type of hydatidiform moles  | No. of patients   |
| 1) Complete H.moles         | 38 (76%)         |
| 2) Partial H.moles          | 11 (22%)         |
| 3) Complete mole with atypical trophoblastic proliferation | 1(2%) |

| TABLE 2: This table gives the information regarding the reproductive age of patients. |
|-----------------------------|------------------|
| Age in years                | No. of patients  |
| 1) <20                      | 17 (34%)         |
| 2) 21-35                    | 11(22%)          |
| 3) >35                      | 22 (44%)         |

| TABLE 3: Gestational age noted in 50 cases is depicted in the following table. |
|-----------------------------|------------------|
| Gestational age in months   | No. of patients  |
| 1-2 months                  | 16 (32%)         |
| 2-5 months                  | 26 (52%)         |
| >5 months                   | 8 (16%)          |
histopathological services over the years which have led to early recognition of the disease. Histological examination forms the main diagnostic tool in the diagnosis of molar pregnancy. Mainly four diagnostic tools were used in the present study which included trophoblastic hyperplasia, pseudoinclusions, cistern formation and vessels in the villous stroma. Abnormal trophoblastic hyperplasia is a requirement for the diagnosis of molar pregnancy. In the present study, the degree of trophoblastic hyperplasia was more marked in CHM as compared to PHM and it exhibited a circumferential pattern. Cistern formation was mainly seen in CHM. Mayun\textsuperscript{14} in his study of 73 cases of molar gestation reported trophoblastic hyperplasia in 80% cases of both CHM and PHM. Cistern formation occurred in 80% cases of CHM and 40% cases of PHM. However there is considerable overlap in the histological features between complete and partial mole resulting in significant interobserver variability in the diagnosis. Moreover molar pregnancies are being evacuated early in gestation before the development of well established classical morphological features thus adding to the difficulty in diagnosis\textsuperscript{4}.

**Conclusion**

We concluded that CHM and PHM have widely different prognosis and therefore require very accurate diagnostic criterias for their recognition. The disease was common in extremes of ages. Frequency of CHM was higher as compared to PHM. Morphological features of CHM differ from PHM but with some overlap. Biological variability and scarcity of available tissue however will sometimes impose difficulties in the differential diagnosis between CHM and PHM.

**Acknowledgements**

NONE

**Funding**

None

**Competing Interests**

NONE

**Reference**


