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PREVALENCE OF MOLAR PREGNANCY IN A TERTIARY CARE HOSPITAL: A TWO YEARS RETROSPECTIVE STUDY.

Arts

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ABSTRACT

BACKGROUND: H Mole is a part of generic term, Gestational trophoblastic disease (GTD). This term describes a spectrum of abnormal trophoblastic proliferation associated with villous enlargement or neoplasm without villi (choriocarcinoma). Hydatidiform mole is an abnormal gestation characterized by trophoblastic hyperplasia and overgrowth of placental villi. H. Mole is classified as a complete mole (CHM) and a partial mole (PHM).

The diagnosis is based on histopathology and genetic origin. In our setup we used only histopathological diagnostic criteria.

Materials And Methods: A retrospective study for a period of two years from January 2017 to December 2018 was conducted in the Department of Pathology and case records of all molar pregnancies during the study period were analyzed regarding patient's history, clinical presentation, and morphologic features.

RESULTS: A total of 28 cases were examined during the study period which included 20 cases of complete mole and seven cases of partial mole. one case was labeled as a case of complete mole with atypical trophoblastic proliferation.

Frequency of complete mole is higher as compared to partial mole. The disease was common in extremes of ages.

A number of histopathological diagnostic criterias are used to distinguish between CHM and PHM.

It was inferred that there is no single criterion to differentiate CHM from PHM.

KEYWORDS

Hydatidiform Mole , Cisterns , Trophoblastic hyperplasia.

INTRODUCTION:

Hydatidform moles are forms of gestational trophoblastic diseases that involve villous formation. They are characterized histologically by aberrant changes within the placenta; specifically the chorionic villi in these placenta s show varying degrees of trophoblastic proliferation and edema of villous stroma.H moles are categorized either complete hydatidiform moles or partial hydatidiform mole based on biopsy and genetics (1).

H.mole is the premalignant form of gestational trophoblastic neoplasm. It is of clinical and epidemiological interest because of its potential for significant consequences on women 's health (2).

Of the two forms of molar disease, complete hydatidiform moles are more important clinically as they have high propensity for presence (requiring clinical intervention) or prognosis to choriocarcinoma. Of complete moles 15% to 20% will continue on to develop gestational trophoblastic neoplasia, where as less than 5% of partial moles do.

Complete hydatidiform moles are androgenic gestations, typically diploid but occasionally tetraploid. Partial hydatidiform moles are triploid conceptuses, the extra haploid set of chromosomes being paternally derived. Both types of moles are typically followed clinically for persistence by serum beta HCG levels and clinical symptoms (3).

The incidence of molar pregnancy varies by geographical region. It is generally believed that the incidence is high in developing countries. The incidence is higher in females younger than 20 years of age and older than 40 years of age. It is also higher in nulliparous females, in patients of low economic status, and in women whose diet is deficient in protein, folic acid and carotene.(4).

Besides age, history of failed pregnancy increases the incidence of gestational trophoblastic disease. For example elective abortion and Miscarriage are connected with increased risk of molar pregnancy.(1).

Molar pregnancies are one of the etiologies of pregnancy failure. The gold standard for a molar diagnosis is by histopathological examination of the products of conception. The practice of routine histopathological evaluation of tissues obtained at the time of abortion has been the subject of debate because some authors think that it is not necessary as the clinical significance of findings is low with low incidence of hydatidiform mole(5).

By routine histopathologic assessment of products of first trimester spontaneous abortions ,important pathologic diagnosis as molar pregnancy and placental trophoblastic neoplasia can be diagnosed(6).

Therefore histologic examination is the main tool in the diagnosis of molar pregnancy including the degree of trophoblastic hyperplasia, villous contours and scalloping, presence of distinct cisterns, trophoblastic inclusions and presence or absence of nucleated RBCs in fetal vessels (7,8). However there is considerable overlap in the histological features between CHM and PHM 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 (9).

MATERIALS AND METHODS:

This retrospective descriptive study was conducted in Department Of Pathology, Government Medical College Jammu, between January 2017 and December 2018.Case records of all the patients with molar pregnancy were analyzed regarding age of the patient, gestational age, symptoms and histopathology.

INCLUSION CRITERIA:

- All patients having molar pregnancy with elevated beta HCG levels were included.
- All patients having histopathological evidence of disease were included.

Histological diagnosis was attempted in all the cases even when the material obtained was scanty. All the products of conception were fixed in formalin after evacuation and tissue processing was done using standard procedures. Following fixation, sections were stained with Haematoxilin and Eosin and slides were evaluated.

RESULT

A total of 25 cases were identified during the study .

DISCUSSION

In Hydatidiform mole placenta contains grape like vesicles that are visible to the naked eye, these vesicles arise by hydropic change within the chorionic villi that are seen as trophoblastic hyperplasia.

Distinction between CHM and PHM is significant (10).

In the study conducted by Jaffer et. al the frequency of CHM was higher as compared to PHM (11).

In the study conducted by Jangbhadur et.al. the frequency of CHM was 76% (12).

In our study out of 28 cases of H.mole 20 were signed out as CHM and

7 were labeled as PHM, one case was labeled as complete Hmole with atypical trophoblastic proliferation.

Table 1: Types of molar pregnancy seen in 28 cases.

TYPE OF HYDATIDIFORM MOLE	NO. OF PATIENTS.
1. COMPLETE MOLE	20(71.5%)
2. PARTIAL MOLE	7(25%)
3. COMPLETE MOLE WITH ATYPICAL TROPHOBLASTIC PROLIFERATION.	1(3.5%)

Maternal reproductive age is important risk factor H.mole in every region and ethnic group. In the study conducted by Jungbhadur et.al(11)disease was more common at extremes of ages with highest frequency seen in females of greater than 35 years of age (44%) and less than 20 years of age(34%).

These findings were consistent with the results of study conducted by Nizam (13) and Jaffer(14).

In our study H.Mole was common in extremes of reproductive ages with highest frequency in females greater than 35 years of age (45%) and less than 20 years of age (35%).

The available evidence suggests that H.mole arises as a result of defective ova. It is premature in young and post mature in old ages (14).

Table 2: Reproductive age group of the patients.

AGE IN YEARS	NO. OF PATIENTS
1. LESS THAN 20 YEARS	1O(35%)
2. 21 YRS TO 35 YRS.	6(22%)
3.MORE THAN 35 YRS.	12(45%)

Gestational age was also noted in the present study. In a study conducted by Jungbhadur et. al similar findings were noted and maximum number of patients approximately 52% presented during second to fifth month of gestational age.

Koirala et.al. in his study also reported maximum number of cases in second trimester as the most common period of presentation. (15).

In our study maximum number of patients (50%) presented between 2 to 5 months of gestational age. i.e. during first and mid second trimester.

Table 3:Gestational age of the patients included in the study.

GESTATIONAL AGE IN MONTHS	NO. OF PATIENTS.
1 – 2 MONTHS	9(32%)
2 TO 5 MONTHS	14(50%)
MORE THAN 5 MONTHS	5(18%)

Histological examination forms the main tool in the diagnosis of molar pregnancy .Mainly four diagnostic tools were used in the present study which included trophoblastic hyperplasia ,pseudo inclusions , cistern formation and vessels in the villous stroma.

Abnormal trophoblastic proliferation; hyperplasia is a requirement for the diagnosis of molar pregnancy.

In the study conducted by Mayun et.al. molar gestation reported trophoblastic hyperplasia inn 80% of both CHM and PHM(16).

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.in the study conducted by Mayun et.al.molar gestation revealed trophoblastic hyperplasia in 80% of both CHM (80%)and PHM (40%)cases(16).

In our study cistern formation was seen in 75% of CHM cases and 30% of PHM cases. It is therefore inferred that there is a significant overlap in the histological features between CHM and PHM and there fore there is significant interobserver variabity in diagnosis.

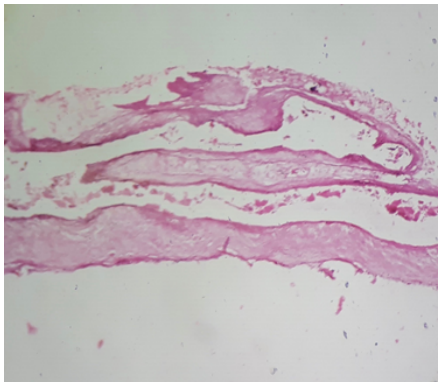

Figure (a) Chorionic villi (H&E , X40) showing focal trophoblastic proliferation and vessel in villous stroma (incomplete mole).

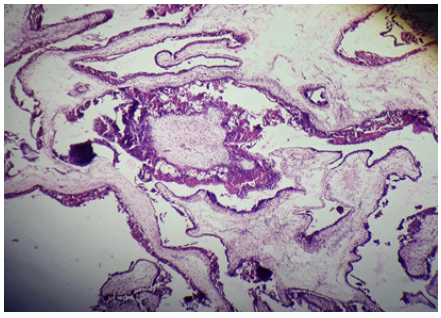

Figure (b) Complete Hydatidiform mole (H & E,,X 20) showing enlarged villi with circumferential trophoblast proliferation.

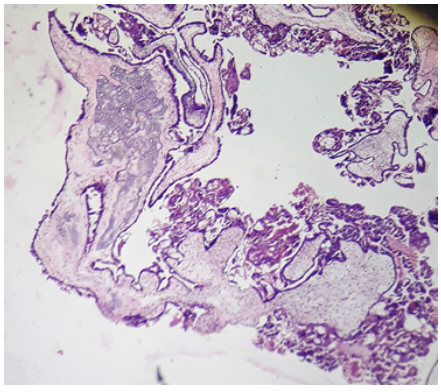

Figure (c) Complete Hydatidiform Mole (H&E X 20): showing variety of villous sizes with cistern and some with circumferential trophoblast hyperplasia.

CONCLUSION

From our study it was inferred that

- Prognosis of CHM and PHM are widely different and therefore require very accurate diagnostic criteria for their recognition. Morphological features of both CHM and PHM differ but there is a significant overlap. Therefore we recommend putting in place capacity to do routine histopathological examination of all the products of conception because of high prevalence of CHM.
- Disease is common in extremes of age group.
- Frequency of CHM is higher than PHM.

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