A Prospective Study of Molar Pregnancies in Teritiary Care Hospital

*Prof.Dr.Sangeeta Shah, Dr.S.Lakshmi Devi[1], Dr.S.Revathi Reddy[2], Dr.Mrinalini Mitra[3], Dr.Kora Sravanthi[4]

*Professor & HOD, Department of Obstetrics and Gynaecology, Gandhi Medical College, Secunderabad, Telangana.
1.   Associate Professor, Department of Obstetrics and Gynaecology, Gandhi Medical College, Secunderabad, Telangana.
2.   Resident & HOD, Department of Obstetrics and Gynaecology, Gandhi Medical College, Secunderabad, Telangana.
3.   Assistant Professor, Department of Obstetrics and Gynaecology, Gandhi Medical College, Secunderabad, Telangana.
4.   Post Graduate, Department of Obstetrics and Gynaecology, Gandhi Medical College, Secunderabad, Telangana.
*Corresponding Author:- Dr.Sangeeta Shah, Professor & HOD of Obstetrics & Gynaecology, Gandhi Medical College/Hospital, Secunderabad, Telangana State

Abstract
Introduction Gestational Trophoblastic Disease (GTD) encompassesa spectrum of disorders that are characterized by abnormal trophoblast proliferation and secretion of abnormal levels of the hormone HCG.GTD lesions are distinct and they can be benign or malignant.Benign lesions consist of hydatidiform moles- completeand partial. Malignant lesions include invasive mole,placental site trophoblastic tumour(PSTT) and choriocarcinoma. Molar pregnancy(Complete or partial) is the most common form of GTD.[1]
Aims and Objective The aim of the study was to review all cases of molar pregnancy detected on ultrasound admitted to a tertiary care institute in a twoyear periodand to study the incidence, clinical presentation, management, complications and outcome of these cases.
Materials and Methods This was a prospective study conducted at Gandhi hospital in the Department of Obstetrics and Gynecology in a two-year period. All cases of molar pregnancy diagnosed on ultrasound were included in the study.Demographic and clinical details of the patients were obtained on admission. The method of termination, complications and post termination follow up of these patients were studied.
Results A total of 43 patients were included in the study, 22 participants had complete mole and 21 participants had partial mole.
Majority of the participants belong to age group of 20-25 years(n=33).The most common complaint at presentation was bleeding pervaginum (n= 37) and most common period of presentation was at 12-20weeks of gestational age (n=20).
10 out of 43 patients had profuse bleeding requiring blood transfusion.No other complications were noted.
In the present study 2 out of 43 participants developed invasive mole and none had choriocarcinoma.
Conclusion Ultrasonography helps in early detection and diagnosis of molar pregnancy. Early diagnosis and treatment can help to cure the disease, decrease morbidity and mortality. Serial Beta HCG monitoring post evacuation helps diagnose neoplastic change leading to prompt initiation of chemotherapy.A multi-centered study is essential in India to determine the true incidence and outcome of molar pregnancy that will help in understanding the burden of the disease.
Keywords-complete mole, partial mole, Hydatidiform mole

I. Introduction

Gestational trophoblastic disease (GTD) is a spectrum of cellular proliferations arising from the placental villous trophoblast. It hasfour main clinicopathologic forms: hydatidiform mole (complete and partial), invasive mole, choriocarcinoma, and placental site trophoblastic tumor (PSTT).The term "gestational trophoblastic neoplasia" (GTN) has been applied collectively to the latter 3 conditions[2] Epithelioid trophoblastic tumour (ETT) is the most recently described and rarest of the trophoblastic tumours[3].

Hydatiform mole or molar pregnancy is of two types, complete mole and partial mole. The complete moles (CM) are characterised by the absence of an embryo, generalised hyperplasia of both syncitio and cyto-trophoblast and villous edema. Genetically they are usually 46XX - the result of fertilization of an anucleate egg with a sperm that reduplicates itself. The partial mole (PM) have some hydropic villi in addition to normal ones which can support fetal existence for some time. It is usually triploid. Molar pregnancies though considered benign have a propensity to transform into malignant choricarcinoma.This risk is greater with complete mole.

The most common clinical presentation of molar pregnancy is missed period and early pregnancy bleeding.[4]Few patients give history of passage of grape like vesicles which is pathognomonic of a mole.[5] Molar pregnancy may be associated with exaggerated pregnancy symptoms, due to high beta-HCG levels, rare presentations include thyroid storm and preeclampsia.

In the past, molar pregnancies had a high fatality rate. However, with the advent of imaging techniques molar pregnancies are diagnosed early leading to prompt evacuation. Early evacuation along with beta-HCG follow up andinitiation of chemotherapy in indicatedcases has made this disease curable along with preservation of further reproductive function.

II.   Materials And Methods

This was a prospective descriptive study conducted at Gandhi hospital in the department of Obstetrics and Gynaecology after approval by ethical committee.All consenting women diagnosed with molar pregnancy confirmed by ultrasound and reporting to Gandhi hospital between November 1st 2018 and October 31st 2020 were included in the study.

Exclusion Criteria
- Patients with early pregnancy bleeding of other etiology.
- Patients in whom diagnosis of molar pregnancy was not certain.

Written informed consent was taken from all women recruited into the study after explaining the nature of the study. The following parameters were collected and analysed for each patient
- Sociodemographichistory including age, address, parity, gestational age, outcome of previous pregnancies including past history of molar pregnancy and outcome.
- Presenting complaints –Incidental diagnosis on USG, bleeding per vaginum, abnormal presentation if any.
- General physical examination –Vital parameters of the patients, presence of anemia,
- Systemic examinationSize of the uterus, per vaginal bleeding.
- Investigations complete blood picture, blood grouping and typing, thyroid profile, serum beta-HCG levels, chest radiograph..
- Procedure for evacuation.
- Follow-uphistopathology report, beta-HCG monitoring.

The data thus collected was tabulated, analyzed and presented in percentages and proportions.

III.   Results

A total number of 43 patients were included in the study.
- Age Distribution- Majority of the participants were of theage group of 20-25 years

(n =33,76.7%).None of the patients were <20years and >30 years.

Fig 1 Pie diagram showing age distribution among cases

■ 20-25 years ■ 25-30 years
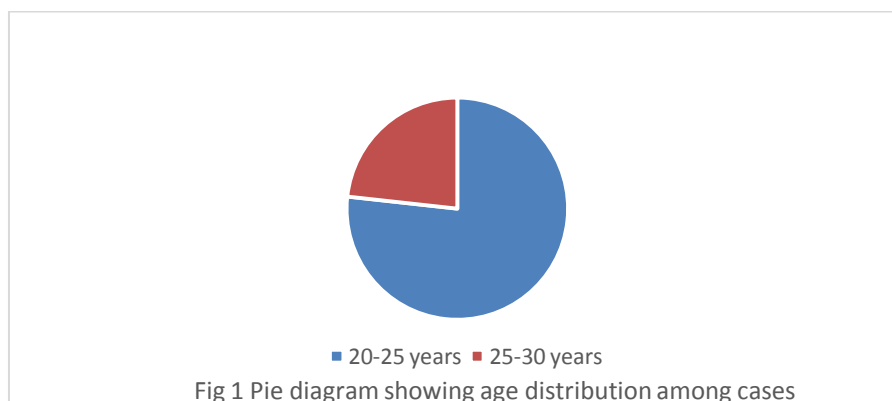
- Blood Group8 (18.6%)participants were of A positive blood group, 11 (25.6%) participants had B – positive, 2 (4.7%) participants had AB positive and 22 (51.2%) participants had O positive. None of the participants were Rh Negative.


■ A positive ■ B positive ■ O positive ■ AB positive
Fig 2 - Pie diagram showing blood group of cases.
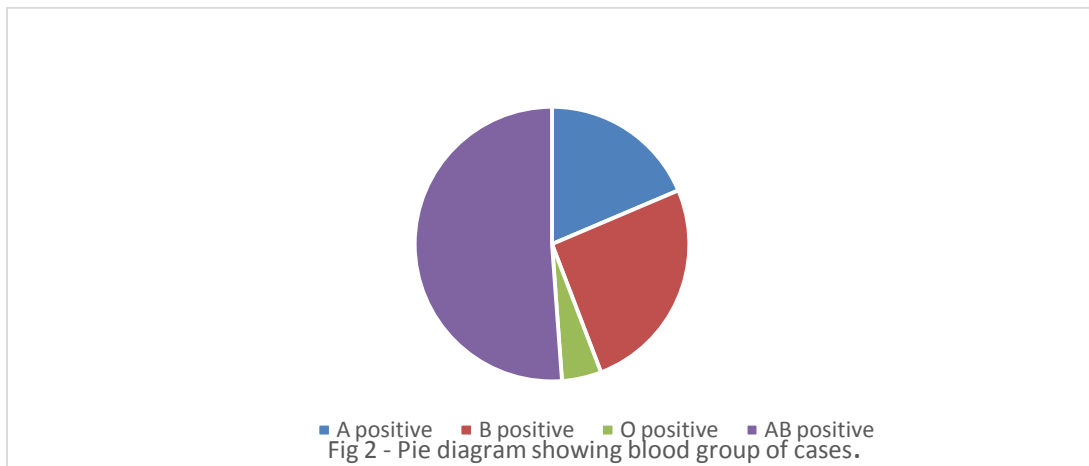
- Parity10(23.25%) of the participants were Primigravida, 20(46.51%) of the participants were second gravida, 8(18.6%)of the participants were third gravida and 5(11.62%)of the participants were fourth gravida.

■ Primi ■ G2
Fig 4 - Pie diagram showing parity
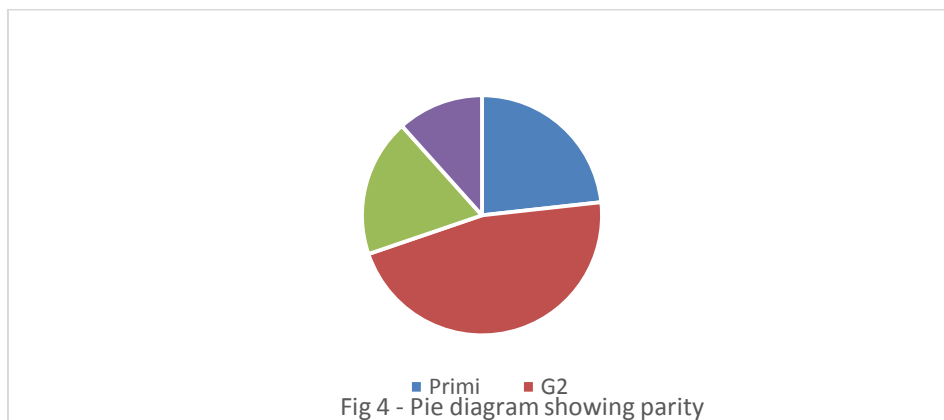
20 patients had at least one term pregnancy in the antecedent pregnancy, 10 patientshad no term pregnancy with only prior abortions. Two (2) second gravida cases had history of molar pregnancy in previous pregnancy.

- Gestational age15 (34.9%) of the participants presented at less than 12 weeks. 26 (60.5%) of the participants presented between 12-20 Weeks while 2 (4.7%) of the participants presented at more than 20 Weeks.

Fig 3- Gestational age at presentation.
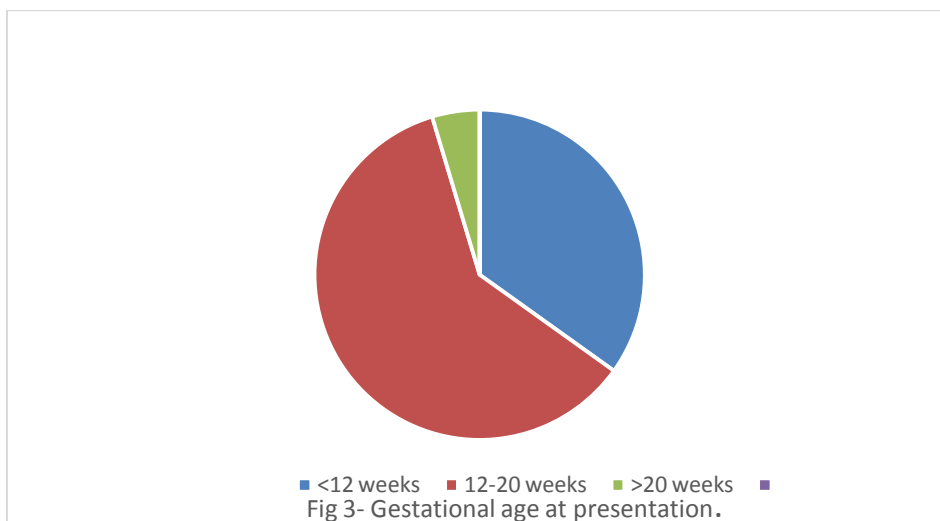
● Presenting Complaints40 (93.0%) of the participants had a period of amenorrhea, 30 had a confirmed pregnancy test prior to presentation.

37 (86.0%) of the participants presented with bleeding per vaginum, among them 10 required transfusion of one or more units of blood. None of the participants gave history ofpassing Grape Like vesicles.

15 (34.9%) of the participants presented with Hyperemesis gravidarum.

● Examination Findings and investigations – Uterine size corresponded to period of gestation in 20 patients, while it was increased in 20 cases and less than period of gestation in 1 case.

All patients had features of molar pregnancy on Ultrasonography.

All patients had normal chest radiograph and thyroid profile.

● Management– All patients were subjected to suction evacuation after preoperative evaluation and surgical fitness. None of the patients had any intraoperative complications.

● HistopathologyIn this study 22 participants(51.2%) had complete mole and 21 participants (48.8%) had partial mole.

● Follow up 5 of the patients did not return back initial management and were lost to follow-up. Among the remaining patients, mean period of follow up was 4.89 months.22 (51.16%) were lost to follow up after the beta-HCG returned to normal value. Only 15 patients completed a follow up of 6 months, among them 2 developed invasive mole. None had choriocarcinoma. One patient conceived again during follow-up period.

IV. Discussion

In the present study majority of the patients (76.7%) belonged to the age group 20-25yrs,mean age was 23.79±2.77 and age ranging was 20-30 yrs. In a study conducted in India by Neeta Kumar et al. majority of their patients (66%) in the age group of 20-25 years with the mean age 24.6 ± 4.4 years[19]. Advanced maternal age(40-50yrs) is considered as risk factor[15,16].but this study did not have patients above 30 years of age.

8 (18.6%) of the participants had Blood Group: A positive. 11 (25.6%) of the participants had Blood Group: B positive. 2 (4.7%) of the participants had Blood Group: AB positive. 22 (51.2%) of the participants had Blood Group: O positive. A similar study conducted by NJ Talati et al[6] found a statistically significant incidence among blood group A cases.

In present study 10(23.25%)patients were primigravida,20(46.51%) were second gravida, and rest had more than two prior gestations. A study from Pakistanby observed 36.5% of patients to be primigravida

The mean GA at Presentation (Weeks) was 12.49 ± 4.03.This is comparable with many other recent studies like Nirmala et al[7] observed a mean gestational age of 11±3 weeks during presentation.

Study by Fatima et al[4] noted bleeding per vaginum to be the commonest symptom seen in 94.2%. T

None of the participants had passing grape like vesicles per vaginum. The classic symptom of passage of grape like vesicles per vaginum was seen in 60% of patients in a study by Ocheke AN et al[5]

22 (51.2%) of the participants had HPE Report as Complete Mole and 21 (48.8%) of the participants had HPE Report as Partial Mole. In a study from Malaysia by Nirmala et al[7], 46.1% observed to have CHM compared to 53.9% having PHM.Only 2 (4.7%) of the participants had GTNwhile in the Malaysian study 3.9% patients developed persistent trophoblastic disease[7],another study from northern part of India by Kumar et al., 23% of the patients developed invasive mole and 14% developed choriocarcinoma[8]

22 (51.16%) were lost to follow up after the first beta-HCG returned to normal value. 5(11.62%) defaulted at follow up even before the first normal beta hCG.In a study by C K Nirmala et al. 27.5% of women were lost to follow up before completing the protocol[6]Batorfi et al. experienced 43% of defaultersand 33% women who attained undetectable hCG but did not complete the protocol[9]

V. Conclusion

GTD have good prognosis with preservation of fertility if diagnosed and treated early. Early pregnancy ultrasonography helps in detection and diagnosis of molar pregnancy. Appropriate diagnosis and treatment can help to cure the disease, decrease morbidity and mortality.Most cases can be cured by simple suction evacuation.

Proper followup of the patients with beta-HCG levels monitoring is required as it helps to detect early post molar GTN. Prompt initiation of chemotherapy in such cases gives favorableprognosis.

A multi-centered study is essential in India to determine the true incidence and outcome of molar pregnancy that will help in the understanding of the burden of the disease.

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