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Original Research Article

A Prospective Observational Study of Molar Pregnancies in Tertiary Care Hospital

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Abstract:

Background: Molar pregnancy, also known as hydatidiform mole, is a type of gestational trophoblastic illness. Gestational trophoblastic disease (GTD), which is caused by an aberrant pregnancy, is a spectrum of benign and malignant tumours, including moles and neoplasms (GTN). This study's objective is to determine the risk factors, complications, and results of molar pregnancy.

Methods: From March 2022 to February 2023, this prospective observational study was carried out in the Department of Obstetrics and Gynaecology, Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar. The study comprised all cases admitted with a diagnosis of molar pregnancy using ultrasonography and serum beta HCG. 34 cases of molar pregnancy had been identified.

Results: The current study incidence of molar pregnancy was 0.4%. In the 20–25 age range, there were the most cases (17, or 50.00%). It was 23.694 years on average. In 5 cases (14.71%), a history of prior moles was discovered. 23 instances (67.65%) of vaginal haemorrhage, 9 cases (26.47%) of hyperemesis, and 4 cases (11.76%) of grape-like vesicles were seen. Six patients (17.65%) lacked symptoms. 8 cases (23.52%) of ultrasounds revealed theca lutein cysts. The most often used kind of treatment, suction evacuation, was used in 21 cases (61.76%). Blood transfusions were necessary due to severe bleeding, which occurred in 16 cases (47.06%) of all cases.

Conclusion: Molar pregnancy increases the risk of mortality and morbidity for mothers. with the first trimester, ultrasonography is frequently used to aid with diagnosis. The secret to prompt treatment and the avoidance of problems is early diagnosis.

Keywords: Molar pregnancy, HCG levels, Hyperemesis, Vaginal bleeding.

Introduction

A subset of tumours that involve aberrant trophoblastic growth are referred to as gestational trophoblastic disease (GTD).[1] GTDs are marked by the trophoblasts of the placenta continuing to grow and develop abnormally even after the pregnancy is over.[2] They can be malignant (invasive mole, placental site trophoblastic tumour, epithelioid tumour, or choriocarcinoma) or benign (total or

partial hydatidiform moles).[3] Gestational trophoblastic neoplasia (GTN) is the term used to describe the cancerous variants of GTD. They may appear weeks, months, or even years after any pregnancy, although hydatidiform moles are most frequently associated with them.[4] GTN are of particular interest because, in contrast to other cancers, they can be totally cured despite extensive metastases with timely diagnosis and treatment. It is possible to maintain the possibility of becoming pregnant and to expect a typical pregnancy. Without prompt therapy and appropriate follow-up, complications have a considerable morbidity and fatality rate. The hormone beta hCG, which is made by trophoblasts, is the most sensitive and exact marker for diagnosis and follow-up.[5]

It is crucial to comprehend the prevalence of the disease, clinical signs and symptoms, risk factors, diagnosis, appropriate care, and requirement for follow-up for better disease spectrum outcomes in order to prevent mortality and morbidity from prenatal trophoblastic disease.

Given this context, the current study was conducted to ascertain the incidence and prevalence of GTD and to examine the disease's presenting signs, symptoms, available treatments, and overall prognosis.

Material and Methods

From March 2022 to February 2023, this prospective observational study was carried out in the Obstetrics and Gynaecology Department of Sri Krishna Medical College and Hospital, Muzaffarpur, Bihar. The study comprised all cases admitted with a diagnosis of molar pregnancy using ultrasonography and serum beta HCG. 34 cases of molar pregnancy were identified during the study period. A record was made of demographic information, risk factors, clinical presentation, complications, and management. There were 7,493 deliveries in total throughout this time. The current study incidence of molar pregnancy was 0.4%. SPSS Version 24 was used to tabulate and analyse the results.

Results

17 instances, or 50.00% of all cases, were in the 20–25 age range. It was 23.694 years on average. A total of 24 cases (or 70.59%) were BPL (below the poverty line). 21 cases (or 61.76%) originated in urban areas. The majority of women, 23, were multiparous (67.65%). In 11 cases (or 32.35%), a history of hormone use was discovered.

Blood type A was present in 16 instances (or 47.06%), blood type O in 9 cases (or 26.47%), blood type B in 6 cases (17.65%), and blood type AB in 3 cases (8.82%). In 5 cases (14.71%), a history of prior moles was discovered.

Table 1: Demographic data and Risk factors

Demographic data	No. of cases	Percentage (%)
Age in years		
15-20yrs	5	14.70%
20-25yrs	17	50.00%
25-30yrs	9	26.48%
30-35yrs	3	8.82%
Socioeconomic Status		
BPL	24	70.59%
APL	10	29.41%
Geographic Location		
Urban	21	61.76%
Rural	13	38.24%

Parity		
Primi	11	32.35%
Multi	23	67.65%
H/o of Contraceptive use		
Hormonal	11	32.35%
IUCD	5	14.71%
Blood Group		
A Group	16	47.06%
O Group	9	26.47%
AB Group	3	8.82%
B Group	6	17.65%
H/o of Previous Molar Pregnancy	5	14.71%

At the time of presentation to the hospital, the majority of the women reported multiple symptoms. 23 instances (67.65%) of vaginal haemorrhage, 9 cases (26.47%) of hyperemesis, and 4 cases (11.76%) of grape-like vesicles were seen. Six patients (17.65%) lacked symptoms. 8 cases (23.52%) of ultrasounds revealed theca lutein cysts. Six instances (or 17.65%) had serum beta hcg levels below 50,000 mIL/ml, 11 cases (or 32.35%) had levels between 50,000 and 1,00,000 mIU/ml, and 17 cases (or 50.00%) had levels over 1,00,000 mIU/ml.

Table 2: Clinical Presentation

Clinical presentation	No. of cases	Percentage (%)
Asymptomatic	6	17.65%
Vaginal bleeding	23	67.65%
Hyperemesis	9	26.47%
Passage of grape like vesicles	4	11.76%
Theca lutein cysts	8	23.52%
Serum beta hcg		
<50,000 mIU/ ml	6	17.65%
50,000-1,00,000 mIU/ ml	11	32.35%
>1,00,000 mIU/ ml	17	50.00%

The most often used kind of treatment, suction evacuation, was used in 21 cases (61.76%). In 3 cases (8.82%), spontaneous abortion had place; in 2 cases (5.88%), hysterectomy was necessary to stop torrential bleeding. In 8 cases (23.53%), suction evacuation and chemotherapy (methotrexate) were needed.

Table 3: Treatment Modality

Treatment	No. of cases	Percentage (%)
Spontaneous abortion	3	8.82%
Suction evacuation	21	61.76%
Hysterectomy	2	5.88%
Suction evacuation + chemotherapy	8	23.53%

Blood transfusions were necessary due to severe bleeding, which occurred in 16 cases (47.06%) of all cases. In one case (2.9%), there was a perforation. Shortness of breath was observed in 4 cases (11.76%), fever in 2 cases (5.88%), and shock in 3 cases (8.82%). Molar pregnancies did not result in any fatalities.

Table 4: Complications of Molar Pregnancy

Complications	No. of cases	Percentage (%)
Bleeding requiring blood transfusion	16	47.06%
Perforation	1	2.9%
Fever	2	5.88%
Shortness of breath	4	11.76%
Shock	3	8.82%

Discussion

From 0.4 per 1000 births in the United States of America to 12.5 per 1000 births in Taiwan, the incidence of gestational trophoblastic disease varies significantly across the globe [6].In another teaching hospital, the incidence of trophoblastic illness ranged from 7.07 per 1000 pregnancies to 8.04 per 1000 deliveries, according to a study conducted from a maternity hospital in Kathmandu[7]. According to a study by Pundir et al., 1.05/1000 births were molar pregnancies.[13]

The incidence of molar pregnancy was 5/1000 in the study by Fatima et al.[8], which is comparable to the current study's rate of 4/1000 births. More over one-third of the patients in the study by Agarwal N et al.[9] were between the ages of 20 and 35, with a range of 16 to 51 and a mean age of 23.7 years. Other research has revealed a connection between the chance of a molar pregnancy and both the upper and lower limits of maternal age. Furthermore, the extent of risk increases rapidly only at the genuine extremes of maternal age (15 and 45 years), with the extent of danger being substantially greater with older rather than younger maternal ages [10]. The mean age was 31.3 in the study by Pundir S et al.[13]. The majority of patients (28.1%) were between the ages of 21 and 25. In the current study, 34 instances, or 50.74% of all cases, fell into the 20–25 age range. It was 23.694 years on average.

Although vaginal bleeding was the most frequent presenting symptom, a research from Israel[11] revealed that 41% of their patients were asymptomatic. Additionally, in this trial, systemic symptoms such hyperemesis, preeclampsia, clinical thyrotoxicosis, and respiratory distress were extremely uncommon. The most common complaint in the study by Agarwal N et al.[14] was uterine haemorrhage (86.3%). Other symptoms included discomfort (33.8%), hyperemesis (26.5%), and passing of grape-like cysts (11.8%); 13.7% of patients did not report any symptoms but were detected during regular testing. Vaginal haemorrhage, hyperemesis, and theca lutein cysts were all observed in 9.37% of the study by Pundir S et al. 94.2% of women in the study by Fatima et al. experienced vaginal bleeding, and 39% had theca lutein cysts. Vaginal haemorrhage was discovered by Goldstein et al[12] in 97% of patients, and hyperemesis in 20–26% of cases. Most of the ladies in the current study reported multiple symptoms when they were admitted to the hospital. 67.65% of women experienced vaginal haemorrhage, 26.47% experienced hyperemesis, and 11.76% passed grape-shaped vesicles. On ultrasound, theca lutein cysts were identified in 23.52% of cases.

Suction evacuation, chemotherapy, and manual vacuum extraction were the various management techniques used in the study by Agarwal N et al.[14] 6.8% of patients received treatment using multiple modalities. Suction evacuation was used in the study by Pundir et al. in 96.8% of cases, suction evacuation combined with chemotherapy was used in 6.2% of cases, and hysterectomy was used in 3.1% of cases. In 87.5% of the instances, blood transfusion was required. In the study by

Goldstein et al., suction evacuation was performed in 72.9% of cases, and 100% of cases required blood transfusions.

In the current study, suction evacuation was used in 21 patients (61.76%), making it the most often used therapeutic method. 8.82% of pregnancies ended in spontaneous abortion, while 5.88% of them required hysterectomy to stop torrential bleeding. In 23.53% of patients, suction evacuation and chemotherapy (methotrexate) were required.

Conclusion

Molar pregnancy increases the risk of mortality and morbidity for mothers. with the first trimester, ultrasonography is frequently used to aid with diagnosis. The secret to prompt management and the avoidance of problems is early diagnosis.

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