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A Study of Incidence, Risk Factors, Complications and Outcome of Molar Pregnancy at a Teriary Care Centre in Andhra Pradesh

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ABSTRACT: BACKGROUND: Molar pregnancy contributes significantly to maternal mortality and morbidity.AIM: To study the risk factors, complications and outcome of molar pregnancy. MATERIAL AND METHODS: The study was a prospective observational study for a period of two years from December2018 to November 2020 in the department of Obstetrics and Gynecology at Siddhartha Medical College, Vijayawada. All cases admitted with a diagnosis of molar pregnancy using ultrasound and serum beta HCG were included in the study. The number of cases of molar pregnancy diagnosed was 67. Demographic data, risk factors, clinical presentation, complications and management were recorded. The total number of deliveries during this period was 14,986. Results tabulated and analyzed using SPSS Version 24. RESULTS: The incidence of molar pregnancy in the present study 0.4 % The maximum number of cases was in the age group 20-25 and were 34 (50.74%).Mean age was 23.694 years. History of previous mole was seen in 9 cases (13.43%).Vaginal bleeding was seen in 41 cases(61.19%), hyperemesis was seen in 19 cases(28.35%),passage of grape like vesicles in 8 cases(11.94%). Twelve cases(17.91%) were asymptomatic. Theca lutein cysts on ultrasound were seen in 16 cases (23.88%). Suction evacuation was the most common treatment modality and was done in 41 cases (61.19%). The most common complication was excessive bleeding requiring blood transfusion and was seen in 32 cases (47.76%).CONCLUSION: Molar pregnancy contributes to maternal mortality and morbidity. Extensive use of ultrasound in the first trimester helps in diagnosis. Early diagnosis is the key to timely management and prevention of complications

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

I. INTRODUCTION

Gestational Trophoblastic Disease constitutes a spectrum of tumors and tumor-like conditions characterized by abnormal proliferation of pregnancy associated trophoblastic tissues of varying propensities for invasion and spread [1,2,3,4] . Hydatidiform mole (H-mole) refers to an abnormal pregnancy characterized by varying degrees of trophoblastic proliferation (both cytotrophoblast and syncytiotrophoblast) and vesicular swelling of placental villi associated with an absent or an abnormal fetus/embryo. Reports of the incidence of molar pregnancy vary by geographic region [5] . The incidence appears to be higher in women from South Asia, including a trend towards recurrent molar pregnancies [6,7] The highest incidence of hydatidiform mole per 1000 pregnancies is seen in South East Asia with rates ranging from 13 in Indonesia, 8 in Taiwan, 5 in Philippines and 3.8 in Japan, North America, Europe and Oceania have the lowest incidence with approximately 0.5-1.84/1000 pregnancies[8,9] .

II. MATERIAL AND METHODS

The study was a prospective observational study for a period of two years from December 2018 to November 2020 in the department of Obstetrics and Gynecology at Siddhartha Medical College, Vijayawada. All cases admitted with a diagnosis of molar pregnancy using ultrasound and serum beta HCG were included in the study. The number of cases of molar pregnancy diagnosed was 67during the study period. Demographic data, risk factors, clinical presentation, complications and management were recorded. The total number of deliveries during this period was 14,986. The incidence of molar pregnancy in the present study 0.4 %Results tabulated and analyzed using SPSS Version 24.

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III. RESULTS

TABLE I DEMOGRAPHIC DATA AND RISK FACTORS

DEMOGRAPHIC DATA	NUMBER OF CASES	PERCENTAGE (%)
AGE in years		
15-20yrs	11	16.4%
20-25yrs	34	50.74%
25-30yrs	17	25.35%
30-35yrs	5	7.4%
SOCIOECONOMIC STATUS		
BPL	48	71.64%
APL	19	28.35%
GEOGRAPHIC LOCATION		
URBAN	41	61.19%
RURAL	26	38.80%
PARITY		
PRIMI	21	31.34%
MULTI	46	68.65%
H/O OF CONTRACEPTIVE USE		
HORMONAL	23	34.32%
IUCD	9	13.4%
BLOOD GROUP		
A GROUP	31	46.26%
O GROUP	18	26.86%
AB GROUP	7	10.44%
B GROUP	11	16.41%
H/O OF PREVIOUS MOLAR PREGNANCY	9	13.43%

The maximum number of cases were in the age group 20-25 and were 34 (50.74%).Mean age was 23.694 years. 48 cases(71.64%) belonged to BPL(below poverty line). 41 cases(61.19%) were from urban area. Maximum women were multiparous and were 46 cases(68.65%).History of hormonal use was seen in 23 cases(34.32%).Blood group A was seen in 31 cases(46.26%), O group was seen in 18 cases(26.86%), B group was seen in11 cases(16.41%) and AB group was seen in 7 cases(10.44%). History of previous mole was seen in 9 cases (13.43%)

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TABLE II CLINICAL PRESENTATION

CLINICAL PRESENTATION	NUMBER OF CASES	PERCENTAGE (%)
ASYMPTOMATIC	12	17.91%
VAGINAL BLEEDING	41	61.19%
HYPEREMESIS	19	28.35%
PASSAGE OF GRAPE LIKE VESICLES	8	11.94%
THECA LUTEIN CYSTS	16	23.88%
SERUM BETA HCG		
<50,000 mIU/ ml	12	17.91%
50,000-1,00,000 mIU/ ml	21	31.34%
>1,00,000 mIU/ ml	34	50.74%

Most of the women had more than one symptom at the time of presentation to the hospital. Vaginal bleeding was seen in 41 cases (61.19%), hyperemesis was seen in 19 cases (28.35%), passage of grape like vesicles in 8 cases (11.94%). 12 cases (17.91%) were asymptomatic. Theca lutein cysts on Ultrasound was seen in 16 cases(23.88%).Serum beta hcg levels were less than 50,000 mIL/ml in 12 cases(17.91%), between 50,000-1,00,000 mIU/ ml in 21 cases(31.43%) and greater than 1,00,000 mIU/ ml in 34 cases (50.74%).

TABLE III TREATMENT MODALITY

TREATMENT	NUMBER OF CASES	PERCENTAGE (%)
SPONTANEOUS ABORTION	6	8.5%
SUCTION EVACUATION	41	61.19%
HYSTERECTOMY	4	5.9%
SUCTION EVACUATION + CHEMOTHERAPY	16	23.88%

Suction evacuation was the most common treatment modality and was done in 41 cases (61.19%).Spontaneous abortion occurred in 6 cases (8.5%), Hysterectomy was required in 4 cases (5.9%) to control torrential bleeding. Suction evacuation plus chemotherapy (methotrexate) was required in 16 cases (23.88%).

TABLE IV COMPLICATIONS OF MOLAR PREGNANCY

COMPLICATION	NUMBER OF CASES	PERCENTAGE (%)
BLEEDING REQUIRING BLOOD TRANSFUSION	32	47.76%
PERFORATION	2	2.9%
FEVER	4	5.9%
SHORTNESS OF BREATH	8	11.94%
SHOCK	5	7.46%

The most common complication was excessive bleeding requiring blood transfusion and was seen in 32 cases (47.76%). Perforation was seen in 2 cases (2.9%).Fever was seen in 4 cases (5.9%), shortness of breath was seen in 8 cases (11.94%) and shock occurred in 5 cases (7.46%). There were no deaths due to molar pregnancies.

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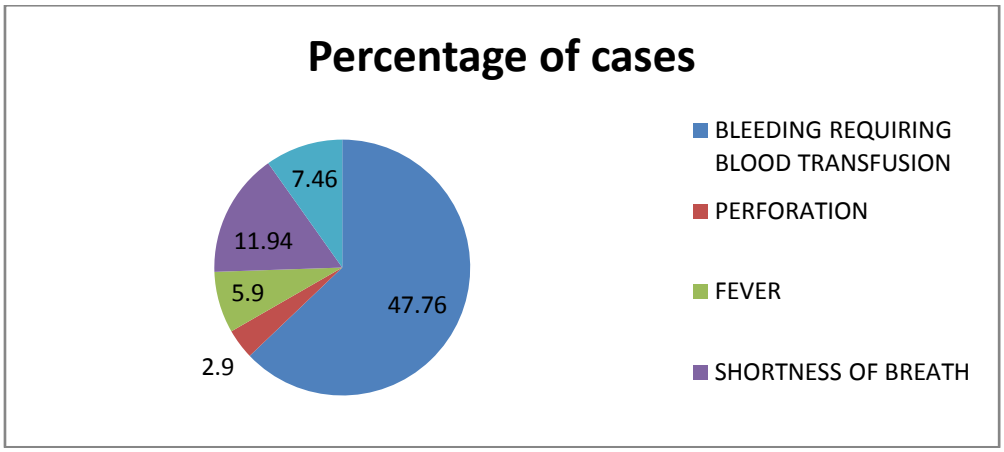
Chart 1:



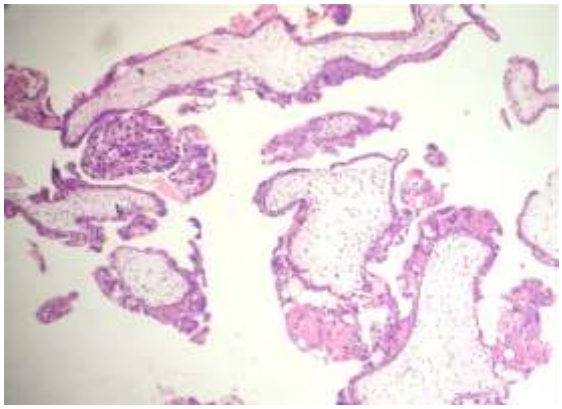


Figure 1: Molar pregnancy:Hydropic villi with circumferential trophoblastic proliferation(H&E,100X)

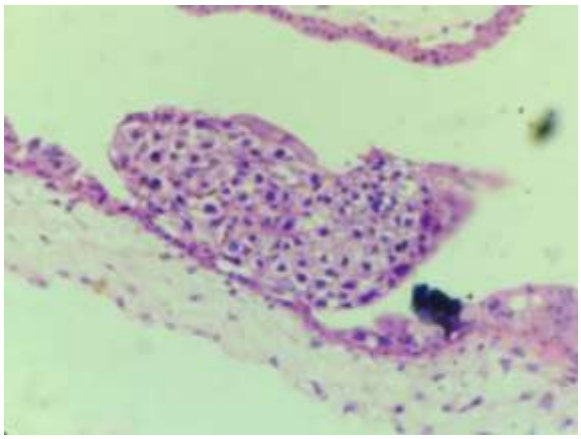


Figure 2:Molar pregnancy:Hydropic villi with proliferation of cytotrophoblast (H&E,400X)

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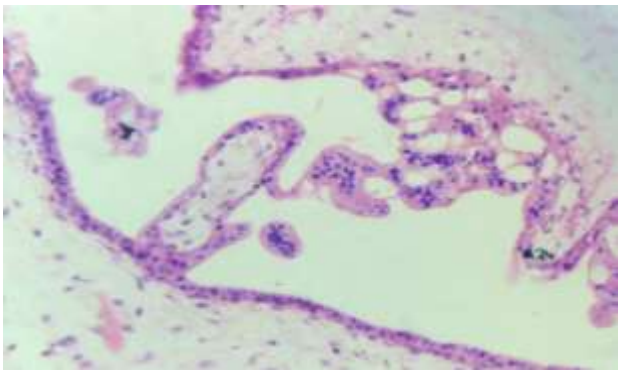

Figure 3:Molar pregnancy:Hydropic villi with proliferation of syncytiototrophoblast (H&E,400X)

IV. DISCUSSION

The incidence of Gestational Trophoblastic Disease varies greatly in different parts of the world, with 0.4 /1000 births in United States of America to 12.5/1000 births in Taiwan [10].A study done from maternity hospital of Kathmandu reported annual incidence of 2.84 and 3.24 per 1000 live births while in another teaching hospital the incidence of trophoblastic disease ranged from 7.07 per 1000 pregnancies to 8.04 per 1000 deliveries[11] .Incidence of molar pregnancy was 1.05/1000 births in a study by Pundir et al [5] .In the study by Fatima et al[12] ,the incidence of molar pregnancy was 5/1000 similar to the present study which was 4/1000 births.

In the study by Agarwal N et al [13] 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.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 [14]. In the study by Pundir S et al mean age were 31.3. Majority of patients (28.1%) belonged to the 21-25 age groups. In the present study, the maximum number of cases was in the age group 20-25 and were 34 (50.74%).Mean age was 23.694 years.

A study from Israel[15] showed that although vaginal bleeding was the most common presenting symptom while 41 % of their patients were asymptomatic. Furthermore, systemic manifestations such as hyperemesis, preeclampsia, clinical thyrotoxicosis and respiratory distress were exceedingly rare in this study. In the study by Agarwal N et al uterine bleeding was the most frequent (86.3 %) complaint. The other presenting symptoms were pain (33.8 %), hyperemesis (26.5 %) and passage of grape like cysts (11.8 %) while 13.7 % did not report any symptoms and were diagnosed on routine examination. In the study by Pundir S et al vaginal bleeding was seen in 90.2% cases, hyperemesis in 43.5%, and theca lutein cysts in 9.37%. In the study by Fatima et al, vaginal bleeding was seen in 94.2% and theca lutein cysts in 39%. Goldstein et al [16] found vaginal bleeding in 97% cases and hyperemesis in 20-26% cases. In the present study, most of the women had more than one symptom at the time of presentation to the hospital. Vaginal bleeding was seen in 61.19%, hyperemesis was seen in 28.35%, passage of grape like vesicles in 11.94%. Theca lutein cysts on ultrasound was seen in 23.88%.

In the study by Agarwal N et al, the various management methods were suction evacuation, chemotherapy and manual vacuum extraction. Combined treatment modalities were used among 6.8 % of patients. In the study by Pundir et al, suction evacuation was performed in 96.8% of cases, suction evacuation plus chemotherapy in 6.2% and hysterectomy in 3.1% of cases. Blood transfusion was required in 87.5% cases. In the study by Goldstein et al suction evacuation was done in 72.9% cases and the need for blood transfusion was seen in 100% of cases. Suction evacuation was the most common treatment modality in the present study and was done in 41 cases(61.19%).Spontaneous abortion occurred in 8.5% cases, Hysterectomy was required in 5.9% cases to control torrential bleeding. Suction evacuation plus chemotherapy (methotrexate) was required in 23.88% cases.

V. CONCLUSION

Molar pregnancy contributes to maternal mortality and morbidity. Extensive use of ultrasound in the first trimester helps in diagnosis. Early diagnosis is the key to timely management and prevention of complications.

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