
ORIGINAL ARTICLE

Incidence and Presentation of Molar Pregnancy at Bahawal Victoria Hospital, Bahawalpur

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ABSTRACT

Background: Molar pregnancy is the most common form of gestational trophoblastic neoplasia. Incidence of molar pregnancy varies globally and appears to be higher in south east Asia. The objective of this study was to find out the incidence and presentation of molar pregnancy at Bahawal Victoria Hospital Bahawalpur.

Patients and Methods: A 6 year retrospective, descriptive study conducted at Gynae Unit-II of Bahawal Victoria Hospital, Bahawalpur, from 1st January 2007 to 31st December 2012. Diagnosis of molar pregnancy was made on the basis of history, physical examination and investigations. The incidence and mode of clinical presentation was noted.

Results: A total of 102 cases of molar pregnancies were reported and the incidence of molar pregnancy was 4.17 / 1000 live births during the study period. The mean age of the patients was 31.1 years. 44 (43.1%) patients were either Para 0 or Para 1 while 34 (33.3%) were Para 4 or above. Majority of the patients, 75 (73.5%) were diagnosed during the first trimester. All the patients reported amenorrhea while abnormal vaginal bleeding (92.1%) and uterus size enlargement of more than 4 weeks (81.3%) were the commonest clinical presentations.

Conclusion: The incidence of molar pregnancy is 4.17 / 1000 live births in the study population. Most common mode of presentation is abnormal vaginal bleeding and uterine enlargement.

Keywords: Molar pregnancy, gestational age, vaginal bleeding, uterus size.

INTRODUCTION

Molar pregnancies occupy a significant burden of disease on the spectrum of gestational trophoblastic neoplasia. Its incidence appears to be higher in South Asia as compared to other parts of the world.^{1,2} The higher trend in some populations has been attributed to “nutritional and socioeconomic status”.³

The world health organization has classified gestational trophoblastic diseases into pre-malignant diseases i.e. complete hydatidiform mole (CHM) and partial hydatidiform mole (PHM) and malignant disorders i.e. invasive moles, gestational choriocarcinoma and placental site trophoblastic tumors.⁴ Hydatidiform moles are classified on the basis of histological examination and genetic origins as complete or partial. Partial hydatidiform moles are genetically nearly all triploid with two paternal and one maternal chromosome sets.⁵ CHM are generally diploid and androgenetic in origin, all 46 chromosomes being derived from the father. They may be monospermic, arising by fertilization of an enucleate egg by a single spermatozoon which then doubles or dispermic by fertilization of an enucleate egg by two

spermatozoa. Rarely CHM can be Biparental in origin having chromosome complement from both partners.⁶

The problems in accumulating reliable epidemiologic data for molar pregnancy can be attributed to a number of factors, such as inconsistencies in case definitions, inability to adequately characterize the population at risk, no centralized databases, lack of well-chosen control groups against which to compare possible risk factors, and rarity of the diseases.⁷ Studies conducted in United States, Australia, New Zealand, Europe and North America reported the incidence of molar pregnancy ranging between 0.57–1.1 per 1000 pregnancies, while studies in Japan have shown an incidence as high as 2.0 per 1000 pregnancies.⁸ Molar pregnancy is noted as 1/125 in some high incidence areas in Southeast Asia and in the Middle East, the incidence is about 1/500.⁹ In Pakistan very little data is available on incidence and clinical presentations of molar pregnancies. The current study aims to find out the incidence and presentation of molar pregnancy in patients reporting to Bahawal Victoria Hospital, Bahawalpur, a tertiary care hospital or South Punjab.

MATERIALS AND METHODS

This 6 year descriptive study was conducted at Gynaecology Unit-II of Bahawal Victoria Hospital, Bahawalpur, from 1st January 2007 to 31st December 2012. Ethical approval for the current study was taken from the institution's ethical committee.

Detailed history of patients was taken and examination was done. Blood grouping Complete blood count, serum β -hCG level, pelvic ultrasound, X-Ray chest were done in all the patients. Other relevant investigations were also done if indicated. All women underwent trans-abdominal ultrasound of abdomen and pelvis. Incidence of molar pregnancy was noted and patients were further evaluated for risk factors, clinical presentation, associated complications and follow up. All patients were managed with suction and evacuation except two. There two patients were Para 6 and their hysterectomy was done. Patients were confirmed with histopathological findings to have a molar pregnancy. Data was collected and entered into the Statistical Package for Social Sciences (SPSS) version 14.0.

RESULTS

During the study period, a total of 102 cases of molar pregnancies were diagnosed and confirmed on histopathology. The total number of live births during the same period was 24456 and the incidence of molar pregnancy was 4.17 / 1000. (Table No.1)

The mean age of the patients was 31.11 years and majority of the patients (30.4%) were between 20-30 years of age. (Table No.2)

Majority of the patients, 70 (68.6%) belonged to low socioeconomic status (<Rs 6000 / month income). (Table No. 3)

There were 44 (43.1%) patients who were either Para 0 or Para 1 while 34 (33.3%) were Para 4 or above. (Table No.4)

At the time of presentation, mean gestational age of the patients was 12.71 weeks, while the range was 10 to 24 weeks. Majority of the patients, 75 (73.5%) were diagnosed during the first trimester.

All the patients reported with amenorrhea. Abnormal vaginal bleeding was the second commonest mode of presentation, seen in 94 (92.1%) patients. Other common presentations were uterus size enlargement of more than 4 weeks corresponding to the gestational age in 81

(81.3%), baseline anemia 55 (53.9%) and abdominal pain 18 (17.6%). (Table No.6)

Table 1: Total Number of Live Births and Incidence of Molar Pregnancy

Year	Live Births	Molar Pregnancies	Incidence of Molar pregnancy / 1000
2007	3011	9	3.0
2008	3503	15	4.3
2009	3973	16	4.0
2010	4566	20	4.4
2011	4805	17	3.5
2012	4598	25	5.4
Total	24456	102	4.17

Table 2: Age distribution of patients with Molar Pregnancies

Age	Number of patients (%)
<20	21 (20.6%)
21-30	31 (30.4%)
31-40	26 (25.5%)
>40	24 (23.5%)
Total	102 (100%)

Table 3: Socioeconomic Status of patients with Molar Pregnancies

Socioeconomic Status (monthly income)	Number of Patients (%)
< Rs.6000	70 (68.6%)
>Rs 6000 – 12000	26 (25.4%)
>Rs. 12000	6 (5.9%)

Table 4: Parity status of Patients with Molar Pregnancies

Parity	Number of patients (%)
0-1	44 (43.1%)
2-4	24 (23.5%)
>4	34 (33.3%)
Total	102 (100%)

Table 5: Clinical Presentations of Patients with Molar Pregnancies

Clinical Presentation	Number of patients (%)
Amenorrhea	102 (100%)
Abnormal Vaginal Bleeding	94 (92.1%)
Enlarge Uterus size as > 4 weeks corresponding to gestational age	81 (81.3%)
Anemia	55 (53.9%)
Hyperemesis gravidarum	14 (13.7%)
Abdominal Pain	18 (17.6%)
Fever	6 (5.9%)

DISCUSSION

There is a wide variation in the epidemiology of molar pregnancy around the world.^{10, 11} Possible ethnic, racial, genetic or cultural differences have not been attributed to an increased incidence of molar pregnancy.¹²⁻¹⁴ In the present study, an overall incidence of molar pregnancy was seen as 4.17 / 1000 live births. These figures are much higher as compared to other studies conducted in Japan,¹⁵ Nigeria,¹⁶ or Uganda.¹⁷ In a local study, Fatima et al¹⁸ in 2011 reported an incidence of molar pregnancy as 5/1000 and another local study reported 3.5 / 1000.¹⁹ The increased incidence in our area might be due to low socioeconomic and poor educational status of patients. A study conducted in Korea proved that improvement in medical care and social-economic and educational conditions decreased the incidence from 4.4 (1960s) to 1.6 (1990s).²⁰

In current study 70 (68.6%) patients belonged to low socioeconomic status (<Rs 6000 / month income). Low socioeconomic status is consistently associated with molar pregnancies. Studies from Philippine,²¹ Korea,²² Turkey²³ as well as Pakistan¹⁹ have confirmed that rate is high in people with low socioeconomic and poor educational status. The high incidence of molar pregnancy in patients presenting at Bahawal Victoria Hospital might be due to the fact that this hospital is a tertiary care hospital serving a large population (both rural and urban) of South Punjab.

Advance or very young maternal age has been strongly correlated to molar pregnancy.^{24,25} In this study, majority of the patients (30.4%) were between 20-30 years of age. Similar results were found in a study conducted at Karachi and another in South Africa. The available evidence suggests that molar pregnancy arises as a consequence of defective ova.²⁶ It is premature in young and post mature in elderly.

Nulliparity is an established risk factor associated with Molar Pregnancy.^{16, 20} Majority of the patients (43.1%) in this study were either Para 0 or Para 1. These findings are also consistent with those of current literature.²⁷, as well as with other local studies conducted at Quetta¹⁸ and Jamshoro.²⁸

Globally 80-90% of molar pregnancies have been reported during 6-16 weeks of gestation.²⁹ Similar results were found in this study where majority of the patients, 75 (73.5%) were diagnosed during the first trimester. These results

are in line with a recent study conducted in Nigeria.¹⁶

In current study, all the patients reported with amenorrhea while other commonest findings were abnormal vaginal bleeding in 94 (92.1%), uterus size enlargement of more than 4 weeks corresponding to the gestational age in 81 (81.3%) and anemia in 55 (53.9%). Most common presentation of molar pregnancy are amenorrhea, vaginal bleeding, uterus size more than the gestational age, hyperemesis,³⁰⁻³². Similar results have been shown in the current study which is in line with the literature^{6, 15, 27}. Excessive uterine size has been listed as one of the commonest mode of presentation of molar pregnancy.^{32, 7}.

CONCLUSION

The incidence of molar pregnancy is 4.17 / 1000 live births at Bahawal Victoria Hospital. Most common mode of presentation is amenorrhea, abnormal vaginal bleeding and increased uterus size.

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