ORIGINAL ARTICLE

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

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ABSTRACT

Background: Gestational Trophoblastic Disease (GTD) forms a group of disorder including hydatidiform mole, invasive mole, choriocarcinoma and placental-site trophoblastic tumor. The objective of this study was to find out the incidence and clinical presentation of GTD at our institution.

Patients and Methods: One year retrospective, descriptive study conducted at Gynae Unit-II of Bahawal Victoria Hospital, Bahawalpur, from 1st Januay 2013 to 31st December 2013. Complete blood picture, blood grouping, serum β-hCG level, ultrasonograpghy and chest X-ray were done. The patients presented with various forms of GTD were noted for histopathology, incidence and clinical presentation.

Results: A total of 28 cases of GTD out of 4530 gynecological admissions were diagnosed. The incidence of GTD was 6.1 / 1000. Histopathology revealed that 25 (89.3%) had hydatidiform mole. Out of these 25 patients, 19 (76%) were having complete mole. Most patients, 27 (96.4%) were having a risk score of < 7. Majority of the patients (53.6%) were between 20-30 years of age. There were 14 (50.0%) patients who were either Para 0 or Para 1. Majority, 22 (78.6%) patients were diagnosed during the first trimester. Amenorrhea was reported in all the patients while abnormal vaginal bleeding (85.7%) and uterus size enlargement (71.4%) were the commonest mode of presentation. Only one patient (3.5 %) died.

Conclusion: The incidence of GTD is 6.1 / 1000 in the study population. Abnormal vaginal bleeding and increased uterus size are the commonest mode of presentation.

Keywords: Gestational trophoblastic disease, vaginal bleeding, uterus size.

INTRODUCTION

GTD comprises of molar pregnancies (complete and partial) through to the malignant conditions of invasive mole, choriocarcinoma and placental site trophoblastic tumour.[1] The incidence of GTD varies globally like in Japan[2], 2/1000 deliveries, 2.8/1000 in Malysia[3] and 2.5/1000 in North America.[4] Turkey[5] reported 12.1/1000 deliveries while local data[6] suggests an incidence of upto 22.3/1000 live births. South Asia presents a higher incidence of GTD as compared to other parts of the world.[6,7] The higher trend in some populations has been attributed to nutritional and socioeconomic status.[8]

Histological examination helps to classify GTD. Hydatidiform moles are divided into complete and partial moles. Partial hydatidiform moles are genetically nearly all triploid with two paternal and one maternal chromosome sets.[9]

Modified WHO Prognostic Scoring System[10]

	0	1	2	4
Age	<40	≥40	–	–
Antecedent pregnancy	mole	Abortion	term	–
Interval months from index pregnancy	<4	4–6	7–12	>12
Pretreatment serum hCG (IU/L)	$<10^3$	10^3–10^4	10^4–10^5	$>10^5$
Largest tumor size (including uterus)	<3	3–4 cm	≥5 cm	–
Site of metastases	lung	spleen, kidney	gastrointestinal	liver, brain
Number of metastases	–	1–4	5–8	>8
Previous failed chemotherapy	–	–	single drug	≥2 drugs

The risk of GTD can be estimated by scoring systems such as the Modified WHO Prognostic Scoring System, wherein scores between 1 and 4 from various parameters are summed together. In

scoring system, women with a score of 7 or greater are considered at high risk.[10] .The rates of GTD are decreasing and survival has dramatically improved in different parts of the world.[11, 12]

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 are the possible hurdles in accumulating the reliable epidemiological data of GTD.[13]

In Pakistan, few studies are available on trophoblastic disease. The current study aims to find out the incidence and presentation of GTD in patients reporting to Bahawal Victoria Hospital, Bahawalpur, a tertiary care hospital or south Punjab.

MATERIALS AND METHODS

This was a 1 year retrospective, descriptive study conducted at Gynecology Unit-II of Bahawal Victoria Hospital, Bahawalpur, from 1st January 2013 to 31st December 2013.

Ethical approval for the current study was taken prior from the Department of Obstetrics and Gynecology, as well as from the institution's ethical committee.

During the study period, all the patients were confirmed with histopathological findings to have GTD. Complete blood picture, blood grouping and serum β-hCG level were done in all the patients. All women underwent ultrasound examination of abdomen and pelvis. In those, having pregnancies below 10 weeks, ultrasound was carried out with full bladder technique. Trans-abdominal examination was done in supine position with full bladder technique, when required. Incidence of molar pregnancy was noted and patients were further evaluated for risk factors, clinical presentation, associated complications and follow up. Gestational age and socioeconomic history was also noted. X-ray chest was done in all diagnosed cases to exclude metastasis. Majority of the patients were managed by suction and evacuation. Data was collected and entered into the Statistical Package for Social Sciences (SPSS) version 14.0.

RESULTS

During the study period, a total of 28 cases of GTD out of 4530 gynecological admissions were diagnosed. The incidence of GTD was 6.1/1000. Histopathology revealed that 25 (89.3%) had hydatiform mole, 2 (7.1%) choriocarcinoma and 1 (3.6%) invasive mole. Out of 25 hydatiform moles, 19 (76%) were having complete mole. (Table No.1) Most patients, 27 (96.4%) were having a risk score of < 7 according to Modified WHO Prognostic Scoring System.

The mean age of the patients was 29.5 with standard deviation of 10.2 years and majority of the patients (53.6%) were between 20-30 years of age. (Table No.2)

There were 14 (50.0%) patients who were either Para 0 or Para 1 and 9 (32.1%) with Para 2 to Para 4. (Table No.3) Mean gestational age of the patients was 11.71 weeks with standard deviation of 3.6 at the time of admission, ranging from 10 to 24 weeks. Majority, 22 (78.6%) were diagnosed during the first trimester.

Amenorrhea was reported in all the patients at the time of admission while abnormal vaginal bleeding (85.7%) and uterus size enlargement of more than 4 weeks corresponding to the gestational age (71.4%), were the commonest mode of presentation. (Table No.4) Most of the patients, 20 (71.4%) belonged to low socioeconomic status (<Rs 8000 / month income). (Table No.5)

One patient (3.5%) died because of pulmonary embolism after suction evacuation.

Table 1: Histopathology status of all the cases

Histopathology	Patients (%)
Molar	25 (89.3%)
Invasive Mole	1 (3.6%)
Choriocarcinoma	2 (7.1%)
Total	28

Table 2: Age distribution of patients

Age	Number of patients (%)
<20	4 (14.3%)
21-30	15 (53.6%)
31-40	6 (21.4%)
>40	3 (10.7%)
Total	28 (100%)

Table 3: Parity status of Patients

Parity	Number of patients (%)
0-1	14 (50.0%)
2-4	9 (32.1%)
>4	5 (17.9%)
Total	28 (100%)

Table 4: Clinical Presentations of Patients

Clinical Presentation	Number of patients (%)
Amenorrhea	28 (100%)
Abnormal Vaginal Bleeding	24 (85.7%)
Enlarge Uterus size as > 4 weeks corresponding to gestational age	20 (71.4%)
Anaemia	11 (42.3%)
Hyperemesis	4 (14.3%)
Abdominal Pain	5 (17.9%)

Table 5: Socioeconomic Status of patients

Socioeconomic Status (monthly income)	Number of Patients (%)
< Rs.8000	20 (71.4%)
>Rs 8000 – 12000	6 (21.5%)
>Rs. 12000	2 (7.1%)
Total	28

DISCUSSION

There is a variation in the epidemiology of GTD around the world.[14] Ethnic, racial, genetic or cultural differences are not attributed to an increased incidence.[11,15] In the present study, incidence of GTD was reported as 6.1/1000 live births. These figures are much higher as compared to other studies conducted in Japan[16] or Uganda.[17] The incidence seems to be higher in Pakistan as shown in studies conducted at Jamshoro,[6] Peshawar[18] and Karachi.[19] The increased incidence might be due to low socioeconomic and poor educational status of patients in our area. This fact was highlighted by the current findings as 71.4% of patients belonged to low socioeconomic status. A study conducted in Korea proved that incidence of GTD can be decreased significantly with improvement in medical care, socioeconomic status and educational changes.[20] Low socioeconomic status is consistently associated with GTD. Studies from Turkey[21] as well as Pakistan[22] have confirmed that rate is high in people with low socioeconomic and poor educational status.

The high incidence of GTD at our institution might also be due to the fact that our hospital is a tertiary care hospital with large peripheries and a referral center from various clinics both private and public.

In our Study, 27 (96.4%) patients were having a risk score of < 7. Patients with a risk score of > 7 are nominated as patients of high risk.[10] It has been established that majority of the patients with GTD, will have low scores.[23]

Majority of the patients (50.0%) in our findings were either para 0 or para 1. These findings are consistent with those of current literature.[24] and local data.[25]

Globally, 80-90% of molar pregnancies are reported during 6-16 weeks of gestation.[1] Similar results were found in our study where majority of the patients, 22 (78.6%) were diagnosed during the first trimester.

We found that all the patients reported with amenorrhea at the time of admission while other commonest findings were abnormal vaginal bleeding in 85.7%, uterus size enlargement of more than 4 weeks corresponding to the gestational age in 71.4%) and baseline anemia in 42.3%. Our study is in line with literature[24] establishing that more than 90% of patients with GTD present with abnormal uterine bleeding, usually during the first trimester. Same findings were also noted by Kim[26] and Zalel et al.[27] Excessive uterine size is related to markedly elevated levels of human chorionic gonadotropin (hCG) and it has been associated with GTD as one of the commonest mode of presentation.[16]

Ultrasonography and serum βhCG are the sensitive detectors of trophoblastic disease. When the sonographic appearance is correlated with the clinical presentation, accurate diagnosis is possible in most cases of GTD.[28]

In present study, most of patients (89.3%) were having hydatidiform mole while 10.7% were having malignant trophoblastic disease in the form of choriocarcinoma and invasive mole. Choriocarcinoma is a potentially fatal disease but current management protocol shows highly favourable prognosis as local data reported a cure rate rate of 80%.[6] In current study, majority of patients with molar pregnancy were treated with suction and evacuation (71.4%). Our results are consistent with the findings of local data which showed that 82.6% patients were managed by the same procedure.[6] The patients with malignant

trophoblastic disease were treated with multiple agent chemotherapy. Those patients who had increased serum βhCG or those with persistent bleeding per vagina, after evacuation, were treated with single drug chemotherapy. One patient had extensive malignant trophoblastic disease and was in poor health, so she received only symptomatic treatment. Complete cure was achieved in 96.4% patients in this study. Only one patient died due to pulmonary embolism after suction evacuation. Follow-up of patients was carried out by clinical examination and investigations. Serum βhCG level, ultrasound examination and X-ray chest were done at follow up visits. Initially, it was carried out monthly, then after every 3 months till the βhCG level was undetected. In patients with benign hydatidiform mole, the serum βhCG level was undetectable within 3 months.

CONCLUSION

The incidence of GTD is 6.1/1000 in the study population, and complete hydatidiform mole comprises most of these cases. Most common mode of presentation is abnormal vaginal bleeding and increased uterus size.

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