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Patient profile of gestational trophoblastic disease at Patan Hospital, Nepal

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ABSTRACT

Introductions: This study was designed to determine the demographic pattern, incidence, clinical features and management outcome of gestational trophoblastic disease (GTD) in Patan Hospital.

Methods: This is a cross sectional study conducted at Patan Hospital from April 13, 2008 to April 12, 2013. Medical record of cases diagnosed as GTD were retrieved from the record section for review. The age, parity, estimated gestational age at the time of evacuation, presence or absence of vaginal bleeding, uterine size in relation to gestational age, ultrasonogram report and urinary beta human chorionic gonadotropin level, histopathology findings, modalities of treatment and outcomes were analyzed.

Results: There was total of 41,543 deliveries during five year study period and 54 GTD on histopathology. Among the 54 GTD, 40 (74%) were molar pregnancy, 8 (14.4%) invasive mole and 6 (11%) choriocarcinoma. The frequency of GTD was 1 per 769 pregnancies. The age of the women with GTD ranged from 15 -50 years. Half of the cases were below 25 years. Most of the women presented between 8-12 weeks of gestation and below third gravida. Amenorrhea with vaginal bleeding was seen in 49 (90%) patients.

Conclusions: The most common GTD observed in this study was molar pregnancy. Vaginal bleeding and lower abdominal pain were the most common complaints at presentation.

Keywords: choriocarcinoma, gestational trophoblastic disease, molar pregnancy, persistent trophoblastic disease

INTRODUCTIONS

Gestational trophoblastic disease (GTD) covers a range of pregnancy-related disorders. This includes complete and partial hydatiform mole which are the premalignant form; invasive mole and choriocarcinoma which are the malignant form and lastly the placental site trophoblastic tumor which is rare. The latter three conditions can progress, invade, metastasize, and lead to death if left untreated or not well treated. These conditions are collectively termed as "gestational trophoblastic neoplasia" (GTN).

There is wide variation in the incidence of GTD across the world.[1] In the Asian countries the incidence is higher than in the Western countries.[2] This study is carried out to determine the demographic pattern, frequency, clinical features and management outcome of GTD at Patan Hospital, Patan Academy of Health.

METHODS

This was a cross sectional study conducted at Patan Hospital after the ethical clearance from the Institutional Review Committee of Patan Academy of Health Sciences. All the cases diagnosed, clinically or by histopathological report, as GTD during the period of April 13, 2008 to April 12, 2013 were retrieved from the medical record section for review. The following variables were analyzed: age, parity, estimated gestational age at the time of evacuation, presence or absence of vaginal bleeding, uterine size in relation to gestational age, ultra-sonogram report and urinary beta human chorionic gonadotropin (βhCG) level, histopathology report, modalities of treatment, management outcome, complications and follow up.

RESULTS

During the five years study period there were 41,543 deliveries. Out of this, 58 were suspected cases of GTD by ultrasound and clinical presentation. Four cases turned out to be product of conception on histopathology report, and were excluded from study. Therefore, the total number of confirmed GTD was 54, 1 per 769 pregnancies. Twenty women were in age group 20-25 years (Table 1) and amenorrhoea with vaginal bleeding was most common presentation in 21 women (Table 2).

Primi gravida were 19 (35.2%), gravida one to four were 28 (51.8%) and 7 (13%) were grand multipara. Patient presenting between gestational age of 8 to 12 weeks were 44 (81%), 14 to 18 weeks were five (9%) and those presenting at 19 to 24 weeks were five (9%).

Table 1. Age distribution of patients with GTD

Age	No.	%
15-19	7	13
20-25	20	37
26-30	12	22.2
31-35	05	9.3
36-40	04	7.4
41-45	01	1.8
46-50	05	9.3
Total	54	100

Gestational trophoblastic disease (GTD)

Table 2. Clinical feature of GTD at presentation

Symptoms	No.	%
Vaginal bleeding	19	35.2
Amenorrhoea	09	16.7
Amenorrhoea with bleeding	21	38.9
Passage of vesicles	01	1.8
Shock	01	1.8
USG diagnosed	03	5.6
Total	54	100

The uterine size at the time of presentation was larger than gestational age in 27 (50%), smaller in 7 (13%) and corresponded to the gestational age in 20 (37%).

All of the cases had suction evacuation and sent for histopathology examination. Fifteen cases (28%) required blood transfusion. Among 54 GTD, 40 were molar pregnancy, six choriocarcinoma and eight invasive mole (Table 3).

Table 3. The GTD according to histopathology report

Type	No.	%
Hydatidiform mole	40	74.1
Choriocarcinoma	06	11.1
Invasive mole	08	14.8
Placental site trophoblastic tumor	00	00
Total	54	100

Out of total 54 GTD patients, 25 (46.2%) did not require further intervention after evacuation, 22 (40.7%) required chemotherapy and seven (12.9%) total abdominal hysterectomy. Repeat evacuation due to retained molar tissue was done in 11 (20%) patients. Ten patients (18.5%) were cured with low risk chemotherapy regime and 12 (22.2%) with high risk chemotherapy regime. Out of 12 high risk chemotherapy regime, ten (18.5%) were conversion from low risk regimen after treatment failure. Low risk regime consisted of Methetrexate and Folinic Acid and high-risk regime consisted of Etoposide, Methetrexate, Actinomycin, Cisplatin and Vincristin.

DISCUSSIONS

This study had 1.3 GTD per 1000 deliveries. Different hospitals in Nepal have reported higher incidence of 2.8 to 5.1 per 1000 deliveries whereas in United States it was only 0.4 per 1000 deliveries.[3,4] The incidence of hydatidiform mole was 1 in 1039 deliveries. Japan has reported hydatidiform mole complicating 2 of every 1000 pregnancies, higher than in our study, whereas much lower in the United States at one per 1000.[5,6] The incidence of choriocarcinoma in this study was 1 in 6924 and one of the leading malignant tumors in women in Africa, but less common the United states at 1 in 30,000 pregnancies.[7,8]

This study also found high incidence of GTD among younger age group below 25 years. Most studies show higher risk in older than 35.[7] Acharya's study also showed 87.5% of molar pregnancy was among young women below 35 years.[9] In Riadh's series, the maternal age factor was identified as an important risk factor and women older than 40 years had substantially higher incidence rates.[10]

Many studies do not show clear relation between gravidity, parity and GTD.[11] But Thapa's study found higher incidence of mole among primigravidae (36.7%) and Elpo in Nigeria reported that parity four and above in particular adds to the risk.[11,12] In this study we found that the incidence of GTD (76%) was more in parity two and less.

Some of the most typical clinical features of molar pregnancy are vaginal bleeding, uterine size larger than date, early onset of preeclampsia, anemia, theca lutein cysts and hyperemesis gravidarum. But there are cases where there is irregular vaginal bleeding lasting for a few weeks to months and the flow varying from spotting to profuse bleeding.[13] Vaginal bleeding is a common symptom, being present about 70 – 97% of the patients in most series.[14] In our study also, vaginal bleeding with amenorrhoea was the most common complaint followed by vaginal bleeding alone. In recent period, complication of GTD such as early onset of pre-eclampsia, pulmonary embolism, severe anemia and large lutein cyst are less commonly encountered because of early diagnosis by sonography.

The uterus was larger than date in 50% of the cases in
this study, consistent with Burger's and Thapa's study.[13,11] Felembam et al reported that only 28% of their cases had uterus larger than date probably because of early detection by ultrasound.[15]

In this study suction evacuation was done in all the cases. Follow up was done initially by weekly serum βhCG until it returned to normal. After which it was done two weekly, then four weekly for six months. The GTN was diagnosed when there was a plateau of βhCG value, that is 1) four values lasting over a period of three weeks or longer, 2) when there was a rise for three consecutive weeks or longer, 3) when remained elevated for six months or more, 4) when there was a histological diagnosis of choriocarcinoma.

Methotrexate with folinic acid rescue was given for low risk GTN which is still the most effective single agent in the treatment of low risk patients. For high risk patients, EMA-CO (etoposide, methotrexate, actinomycin, cyclophosphamide and vincristine) was given.[16]

CONCLUSIONS

In this study molar pregnancy was the most common GTD occurring more in the age group less than 25 years and in parity two or less. The most common presentation were amenorrhoea with vaginal bleeding and more than half of the patient had uterine size larger than date. The most common modality of treatment in this study was suction evacuation.

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