GESTATIONAL TROPHOBLASTIC DISEASE IN BASRAH

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ABSTRACT

To date few studies have been reported from Basrah regarding Gestational Trophoblastic disease GTD. This study was a clinical observational study done in Basrah at the 4 main obstetric hospitals based on 137 patients with GTD. The objective was to study the incidence of Hydatidiform Mole gestation and other Gestational trophoblastic diseases in Basrah and to review the clinical presentation and management of Hydatidiform Mole gestation in Basrah. Clinical records of patients were reviewed with regards to presentation, investigation, management and outcome. Of 137 patients, there were 132 patients (96%) treated for hydatidiform mole, 3 patients (2%) were treated for choriocarcinoma, 1(1%) patient had invasive mole and 1(1%) patient had placental site tumor. The incidence of molar pregnancy and choriocarcinoma was 1.7/1000 deliveries and 0.04/1000 deliveries, respectively. Molar pregnancy seems to be a common problem in Basrah but sever complications such as pre-clampsia & thyrotoxicosis were not reported in this study.

INTRODUCTION

Gestational trophoblastic diseases (GTD) represent a spectrum of neoplastic disorders that arise from placental trophoblastic tissue after abnormal fertilization. Gestational trophoblastic diseases are classified histologically into four distinct groups: hydatidiform mole (complete and partial), chorioadenoma destruens (invasive mole), choriocarcinoma, and placental site tumor[1,2]. These tumors are rare and constitute less than 1% of all gynecological malignancies[3]. The reported incidence of GTD varies in different regions of the world. Overall, approximately 80% of cases of GTD, are hydatidiform moles, 15% are chorioadenoma destruens or invasive mole, and 5% are choriocarcinomas. Choriocarcinoma is associated with an antecedent mole in 50% of cases, a history of abortion in 25%, term delivery in 20%, and ectopic pregnancy in 5%[4]. True estimates of the incidence of molar pregnancies are difficult to obtain because of considerable worldwide variation in the presentation and management of both normal and abnormal pregnancies[4]. The incidence of molar pregnancy demonstrated marked geographic and ethnic differences, ranging from the highest incidence of 1 in 120-400 pregnancies in Asian countries such as Taiwan, Philippines and Japan, to the lowest incidence of 1 in 1000 to 2000 in Europe and the USA[5]. In Iraq the incidence is 1 in 221according to previous statistics[6]. To date few studies have been reported from Basrah regarding Gestational Trophoblastic disease therefore this study was conducted to study the incidence of Hydatidiform Mole gestation and other Gestational trophoblastic diseases in Basrah and to review the clinical presentation and management of Hydatidiform Mole gestation in Basrah.

PATIENTS AND METHODS

This is a retrospective study done in Basrah at the 4 main obstetric hospitals Basra maternity and child hospital, Al Basrah general hospital, AL Faihaa hospital and Al Tahrer hospital through the period of one year (the first of May 2005 till first of May 2006). A special questionnaire form was designed to collect information about those patients who are included in the study, this included points about the history, examination, investigations & management related information about the progress of the patients collected from the clinical records in these hospitals and histopathological laboratories records. Patient who needed chemotherapy were treated in the Oncology center in Basrah Teaching hospital. The management of patients in all 4 hospitals included history, clinical examination which was performed to assess patient's general condition, size of the uterus & presence of adnexal masses. Full laboratory evaluation obtained as a part of pretreatment follow-up, full blood count; urea and electrolytes, thyroid function test, and serum βHCG level were obtained. Radiological investigations included chest X-ray and pelvic ultrasound were done to all patients. CT scan of the brain and pelvis was done in patients in which metastasis was

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suspected. The diagnosis of malignant GTD was based on clinical, radiologic, and biochemical evidence of metastases. After assessment of the general condition by complete investigations and correction of anemia and dehydration, cases of molar pregnancy were treated by evacuation of the uterus by traditional curettage under general anesthesia using sponge forceps and curette since no suction curettage is available. In most of the patients a second evacuation was done routinely according to the ultrasound result in about 10 days later and each time a biopsy was obtained for histopathological examination. Other cases of GTD were treated accordingly. After confirmation of the diagnoses by histopathology, the patients were followed up by βHCG level; follow up was difficult because of the absence of a special referral center and lack of HCG assay in most of the hospitals but most of the cases were followed up by private laboratories.

RESULTS

There were 78674 deliveries during the study period and 137 cases of (GTD) were reported. There were 132 patients (96%) of them were treated for hydatidiform mole, 3 patients (2%) were treated for choriocarcinoma, 1(1%) patient had invasive mole and 1(1%) patient had placental site tumor. As shown in (Table-1).

The incidence of molar pregnancy and choriocarcinoma was 1.7/1000 deliveries and 0.04/1000 deliveries, respectively. The majority of hydatidiform mole cases were complete molar pregnancy 119 (90%) and only 13(10%) were partial. As shown in (Table-1).

Table 1.Cases of gestational trophoblastic diseases.

Gestational trophoblastic diseases	No.	%
Hydatidiform mole	132 Partial = 139 Complete = 13	96
Choriocarcinoma	3	2
Invasive mole	1	1
Placental site tumor	1	1
Total	137	100

The age of patients ranged from 16 to 52 years. The highest percentage of Gestational trophoblastic diseases GTD (36%) was found in patients between 20-29 years of age as shown in (Table-2).

Table 2. The distribution of gestational trophoblastic diseases (GTD) according to age

Age in years	No.	%
< 20	25	18
20-29	50	36
30-40	42	31
40-52	20	15
Total	137	100

Only 6 patients (4%) experienced previous molar pregnancy. All 137 patients with GDT presented with vaginal bleeding of varying severity, while other presentations such as passage of vesicles, ovarian cyst, hyperemesis gravidarum, anaemia, abnormal vaginal growth and acute abdomen, were observed in (6.56%), (6.56%), (3.6%), (2.9%), (2%), (1.5) of patients respectively as shown in (Table-4). Regarding the abnormal vaginal growth, it was found initially in 1 patient (before evacuation) and occurred in 2 patients during the period of follow up together with elevated BHCG level and they were referred to oncology center in Basrah Teaching hospital. For chemotherapy 2 patients had acute abdomen and laprotomy was done which revealed twisted ovarian cyst in one patient and metastatic disease with uterine perforation in the other.

Table 4. The distribution of GTD cases according to their presenting symptoms (Some women had more than one presenting symptom).

Presentation	No. of cases	%
Vaginal bleeding	137	100
Passage of vesicles	9	6.56
Ovarian cyst	5	6.56
Hyper emesis gravidarum	4	3.64
Anemia	3	2.91
Abnormal vaginal growth	3	2.1
Acute abdomen	2	1.5

Regarding treatment: from total 137 recorded patients:

1. *Two (2%) patients were treated with hysterectomy as an initial surgery. These patients were presented with irregular vaginal bleeding, elevated BHCG level together with multiple intrauterine masses; both were older than 40 years of age and did not desire future pregnancy. Histopathological examinations revealed choriocarcinoma in 1 patient and invasive mole in the other. Both were transferred for chemotherapy following surgery.*
2. *One hundred thirty five (98%) patients were treated with curettage, 61 patients had only one evacuation, the remaining 74 patients, had second evacuations about 10 days later and each time a biopsy was obtained for histopathological examination.*

Five patients had hysterectomy after the evacuation for the following reasons:
Histopathological examinations revealed placental site tumor in 1 patient, choriocarcinoma in 2, two patients had hysterectomy despite no malignancy. During the period of follow up 9 patients had persistently high level of BHCG level (more than 20000 IU/ML) 4-6 weeks after evacuation and they were transferred to chemotherapy, one of these patients had partial mole. The total number of patients who received chemotherapy was 14.

Regarding the fate of the patients:

- *The total number of patients who received chemotherapy was 14.*
- *Two patients who received chemotherapy died during the course of treatment*
- *Seventy three had a normal BHCG level 3-4 months after follow up.*
- *The remaining 50 patients were lost from follow up and they did not continue their BHCG follow up. As shown in (Table-5).*

Table 5. The outcome of patients after short term follows up.

The outcome	No. of cases	%
Complete remission after evacuation	73	53.3
Chemotherapy	14	10.2
Lost from follow up	50	36.5
Total	137	100

DISCUSSION

There is considerable variation in the incidence of molar pregnancy in different part of the world. The reported incidence of hydatidiform mole in the present study was (1.7) per thousand maternities (1 in 574) which is less than the results of a previous study done in Basrah 5 years ago which is (2.6) per thousand maternities (1 in 400)[7], This is probably because that study was conducted only in one hospital and the number of cases was limited but still higher than that in neighboring countries like Saudi Arabia (1 in 676)[8]. However a previous study done in Iraq in 1983 showed higher incidence (1in 221) or 4.5 per 1000[1]. The true number of molar pregnancy may be under estimated as many cases may present as missed abortion or anembryonic pregnancy and the ultrasonic distinction from missed abortion may be difficult so histopathological examination of the product of conception following abortion is important[9,10]. Although the majority of the cases of molar pregnancy were a complete hydatidiform mole (113 cases) and only few cases showed a partial hydatidiform mole (9 cases), persistent elevation of BHCG level following evacuation with referral to chemotherapy was reported in one patient with partial mole. Wiesma et al, found that 1.7% of all partial mole pregnancy patients needed treatment for malignant squeals[11]. These findings support the fact that even partial mole need regular and close observation and follow up. Considering etiologic risk factors. The risk factor most consistently associated with GTD in all ethnic groups and geographic regions is maternal age. Several studies reported that the incidence of trophoblastic disease increases in patients over the age of 35 years and the risk is 5-10 fold greater in women over the age of 40 years[12,13]. In the present study (15%) of patients were above the age of 40 years and the majority of patients were at younger age group, these findings are in agreement to that reported by (Mageed J)[7]. Nulliparity was found to be associated with GTD in several studies[14,15]. However, the present study showed that (31%) of patients were diagnosed with trophoblastic disease in their first pregnancy and the higher percentage (52%) of patients having from 1-5 children. Previous history of Molar pregnancy is

another well-established risk factor[16] and in our study, 4% had a previous molar pregnancy. Vaginal bleeding of varying severity occurred in all the patients. Abdominal pain and excessive vomiting were other important presenting symptoms, thus indicating the importance of these symptoms in the diagnosis of hydatidiform mole. Anaemia, consequent upon prolonged vaginal bleeding was noticed in few patients (2%) in our study this may be due to early diagnosis and management. Experience from England and the United States reveals that complete mole is being diagnosed earlier in gestation[17,14] and rarely presents with traditional signs and symptoms. In addition, a study done in Saudi Arabia showed that 54% of the patients were diagnosed during their first trimester and present infrequently with the classical signs and symptoms of GTD[8].

In the present study, all patients except 3 were diagnosed during the first trimester because of the practice of routine first trimester ultrasound examination. The classical literatures on trophoblastic disorders usually stress on the descriptions of significant complications such as trophoblastic embolization to the lung, sever second trimester pre-eclampsia and thyrotoxicosis[17]. Fortunately these complications were not seen in our study which is due to the fact that the disease has been diagnosed in an early stage in pregnancy. However, one should be always bear in mind that despite earlier diagnosis, the potential for post molar persistent gestational trophoblastic disease still remains. Studies[18] have proven that 20% of complete molar pregnancies can progress to persistent disease. In this study only 9(7%) patients of those who had regular follow-up were treated for persistent trophoblastic disease, this low percentage may be due to the fact that 50 patients were lost from follow up. More over in Basrah there was no special center for trophoblastic disorders and all cases were managed individually and specific guidelines of managements were lacking. In addition BhCG assessment is expensive to many patients and is rarely available in general hospitals.

Although there have been advances in the development of effective chemotherapy to improve the survival rate. Surgery remains an important role in the management of gestational trophoblastic disease. In a patient who has completed her family, abdominal hysterectomy offers the advantage of evacuation and sterilization. Additionally, hysterectomy has been shown to reduce the risk of malignant sequelae to approximately 3.5% from 20% anticipated for patients treated with suction curettage[14]. In our study, hysterectomy was performed for 7 patients from which 2 with nonmetastatic trophoblastic disease who did not desire future conception.

Conclusion and recommendations

- *Molar pregnancy seems to be a common problem; the incidence of hydatidiform mole in Basrah was 1.7 per thousand maternities (1 in 574).*
- *The highest percentage of GTD is found in the age group between 20-29 years and in most parous patients having between 1-5 children.*
- *Sever complications such as pre-clampsia, thyrotoxicosis were not recorded in this study while vaginal bleeding was the most common clinical presentation.*
- *This study emphasizes the need for the establishment of a specialist centers for gestational trophoblastic disease in Basrah for diagnosis, treatment and regular follow-up.*
- *Improvement in social circumstances of the community and providing health education with regards to the importance of regular follow-up may change the outcome of gestational trophoblastic disease.*

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