

Gestational Trophoblastic Disease - A Review

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Summary

Total 42 cases of gestational trophoblastic tumour (G.T.T.) were studied. The incidence of H. Mole was 1 in 460, and that of choriocarcinoma was 1 in 3225 pregnancies. Out of a total of 16083 pregnancies, complete moles were 3 times more common than partial mole. The incidence of G.T.D. was found highest in the age group of 20-29 years. 60% of the cases of choriocarcinoma followed a molar pregnancy, 20% followed an abortion and 20% a full term pregnancy. H. Mole cases were mostly treated by S/T and followed up. 7 cases received chemotherapy. 2 cases for residual disease were treated with methotrexate and Folinic Acid (F.A.) and 5 cases with combined chemotherapy by Methotrexate, Actinomycin-D, cyclophosphamide (M.A.C.) (2 cases) and Etoposide, Methotrexate, Actinomycin-D, Cyclophosphamide, Oncovin (Vincristine) (EMA-CO) regime (3 cases). The response and tolerance to EMA-CO was better than MAC. Only one patient required hysterectomy during MAC therapy due to severe haemorrhage. She later expired and that was the only death in our study.

Introduction

Over the last 30 years major advances has taken place in our understanding and management of gestational trophoblastic disease (G.T.D.). It is now possible to diagnose a molar pregnancy by U.S.G. quickly and confidently, to prevent the occurrence of metastatic sequelae in the majority of cases with mole and to achieve a high remission rate in those with metastatic disease.

Material and Methods:

The present study was done among the patients admitted in the gynaecology department of N.R.S. Medical College and Hospital, Calcutta, for a period of 1 ½ years (July'97 to Dec'98). Total 42 cases were studied, and during this period patients were admitted with either pregnancy or its complications. All patients were

evaluated by history, clinical examination, U.S.G. serum b hCG and X-ray chest. The b hCG, being the single most important marker of trophoblastic disease, it will probably remain the mainstay in the diagnosis and management of trophoblastic disease.

All patients were treated by resuscitation, if necessary, evacuation of mole, chemotherapy when required. All of them were followed up regularly with advice to avoid pregnancy.

Results And Analysis:

Total cases of G.T.D. were 42 and total number of pregnancy episodes were 16,083. The incidence of H. mole was 1 in 460 pregnancies, while incidence of choriocarcinoma was 1 in 3225 pregnancies in the present study. H. Mole constituted 83.33% of the cases and G.T.D.

16.67% (Table-I). The number of cases with complete mole was almost 3 times that of the partial mole. 42.9% cases were in the age group of 20-29, and the rest equally divided between the other 3 age groups (Table - II). 60% of the cases of choriocarcinoma developed after a molar pregnancy while other 40% developed following abortion and full term pregnancy (Table - III). Bleeding P/V after a period of amenorrhoea was the commonest presenting symptom (Table - IV) in 88.6% cases. Some of these cases were admitted as missed or threatened abortion, but subsequently diagnosed as molar pregnancy by U.S.G. 28.6% presented with mole already in the process of expulsion, while 22.8% presented with hyperemesis. Very few cases presented with tremor anxiety, tachycardia, weight loss and respiratory distress. In patients having metastasis, metastasis to lungs was found in 80% cases and in the vagina in 20%. There were no cases of liver and C.N.S. metastasis (Table - V). Out of 35 cases with molar pregnancies, 26 were treated with suction evacuation. 5 of them were given prior intracervical prostaglandin for ripening of cervix. The other 9 cases, either in process of expulsion or incomplete mole, had D/E operation (Table - VI). 16.7% of cases received chemotherapy, 5 for chorio-carcinoma and 2 for residual disease. Out of 7 patients who received chemotherapy, 2 underwent laparotomy. One due to sudden severe bleeding P/V in a patient was already on chemotherapy, another due to torsion of theca lutein cyst. Two patients were treated with Methotrexate + F.A. on alternate day. Other 5 cases were treated by combined chemotherapy as M.A.C. regime in two cases and EMA-CO regime in 3 cases (Table-VII). Patient's tolerance were better and side effects were much less in patients receiving EMA-CO., as compared to those receiving M.A.C. regime. Maternal mortality in the present study was 2.3% (Table-VIII). Death occurred in a case of choriocarcinoma due to severe uncontrolled haemorrhage during chemotherapy.

Table - I
Distribution of the cases according to their cause

Cases	No. of Cases [n=]	%	Incidence (Per thousand pregnancies)
A. Hydatiform mole	35 [n=42]	83.33	1 in 460
[i] Complete mole	26 [n=35]	74.3	1 in 625
[ii] Partial mole	9 [n=35]	25.7	1 in 1818
B. G.T.T.	7 [N=42]	16.67	1 in 2326
[i] Invasive mole	- [n=7]	-	-
[ii] Choriocarcinoma	5 [n=7]	71.42	1 in 3225
[iii] PSTT	- [Nil]	-	-
[iv] R.T.D.	2 [N=7]	28.58	1 in 8062

Table - II
Distribution of cases according to age
Incidence [n=42]

Age	H.Mole	Chorico CA	RTD	Total	Percentage
< 19 yrs.	9	1	1	10	23.8
20-29 yrs.	15	2	1	18	42.9
30-39 yrs.	4	1	1	6	14.3
> 40 yrs.	7	1	1	8	19
Total	15	5	2	42	100

Table - III
An analysis of the different pregnancy events leading to choriocarcinoma

Pregnancy event leading to choriocarcinoma	No. of cases [n=7]	Percentage
Post Molar	3	60
Post abortion	1	20
Post full term pregnancy	1	20
Following unknown pregnancy	-	-
Total	5	100

Table - IV
A Comparison of the presenting symptoms in cases of H. Mole

Symptoms	No. of cases [n=35]	Percentage
Bleeding p/v	31	88.6
Passage of grape like vesicles	9	25.7
Hyperemesis	8	22.8
Symptom of hyperthyroidism	1	2.8
Pain abdomen	12	34.3
Fever	1	2.8
Respiratory distress	2	5.7
Convulsions	1	2.8

Table - V
Metastasis in the cases with choriocarcinoma

Site of Metastasis	No. of cases [n=5]	Percentage
A] Lungs	4	80%
Chest pain	2	
Cough	4	
Hemoptysis	2	
Dyspnoea	4	
Positive findings on CXR	3	
B] Vagina	1	20%
C] Liver	-	
D] CNS	-	

Table - VI
A Comparison of the different modes of treatment used

Treatment given	No. of cases [n=42]	Percentage
1. Suction Evacuation	26	61.9
2. Dilatation and Evacuation	9	21.4
3. Chemotherapy	7	16.7
4. Laparotomy		
a) Hysterectomy	1	
b) Marsupialisation of twisted ovarian cyst	1	4.8

Table-VII

Systemic disease	No. of cases (n=7)	Percentage
1. Hypertension	1	14.3
2. Diabetes mellitus	1	14.3
3. Anemia	1	14.3
4. Rheumatoid arthritis	1	14.3
5. Myocardial infarction	1	14.3
6. Stroke	1	14.3
Total	7	100

Table-VIII

Systemic disease	No. of cases	Percentage
1. Hypertension	4	57.1
2. Diabetes mellitus	1	14.3
3. Anemia	1	14.3
4. Rheumatoid arthritis	1	14.3
5. Myocardial infarction	1	14.3
6. Stroke	1	14.3
Total	7	100

Table-IX

Incidence of Trophoblastic Tumours in India
(Menon et al. 1989)

Country	Author and year	n. Mole	Choriocarcinoma
India	Menon and Menon (1979)	10,562	14,207
Thailand	Chattopadhyay and Ghosh (1984)	10,400	14,320
Malaysia	Krishnakumar and Rajan (1977)	10,551	14,150
S. Korea	Lee and Park (1977)	11,197	14,551
S. Vietnam	Bao and Hoang (1987)	10,351	14,555
Colombia	Tharion and Fajoy (1978)	-	14,750
S. Mexico	Red (1971)	10,701	14,601
S. America	Vizcarra and Rodriguez (1978)	10,350	14,351

Discussion

The etiology and management of trophoblastic disease is one of the great success stories of gynaecological oncology. In the present study, the incidence of IC mole was 1 in 460 and the choriocarcinoma was 7 in 1155 pregnancies, which is comparable to other studies as shown in Table IX. The ratio of complete mole to partial mole was found 2.5 : 1. According to Newlands (1992) the ratio was 3:1. The incidence of IC mole was found higher in the age group of 20-29 probably because the maximum number of pregnancies belonged to this age group but the percentage was higher in average pregnancies and those between 30-39 years. 88.6% of IC mole cases were with bleeding. According to Koss (1993), bleeding 70% is the commonest symptom. 87.5% the

treatment of choice for cases of IC mole. Koss and Jaffe (1991) were also positive for IC mole cases in extra uterine cases reported by them. In our study, 3 cases were choriocarcinoma and 1 case was IC mole. In choriocarcinoma 7 cases, 2 (28.6%) were with metastases and 1 (14.3%) case of choriocarcinoma with metastases and 1 (14.3%) case of IC mole with metastases. In our study, we were positive case due to 14.3% pregnancy related treatment with IC mole. According to Chinn et al (1977) (1984) high alpha-fetoprotein with beta hCG, methotrexate or cyclophosphamide as adjuvant treatment and chemotherapy in both arms to be used and late stage treatment group. In a study by Donceel et al (1989) it was reported the adjuvant therapy with IC mole. In our study, it was found as a major treatment with partial with metastases and a high alpha-fetoprotein. IC mole-IC mole is generally well tolerated and treatment usually have better survival because of early diagnosis and as adjuvant treatment in patients with metastases and a high risk factor. As this is only a one year study, it is not possible to comment anything regarding survival rate.

Conclusions

The present study is based on the fact that it is a very curable disease. Proper early diagnosis and early is the key to detection and management of gestational trophoblastic disease or malignant neoplasia of high degree associated and awareness amongst medical professionals helps in early diagnosis.

References

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