

GESTATIONAL TROPHOBLASTIC DISEASE EXPERIENCE AT THE BASIC MEDICAL SCIENCES INSTITUTE, JPMC, KARACHI.

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ABSTRACT

Objective: The study was carried out to evaluate the frequency and types of gestational trophoblastic diseases (GTD) in endometrial and hysterectomy specimen received for histopathology examination.

Setting: Department of Pathology, Basic Medical Sciences Institute, Jinnah Post Graduate Medical Center (JPMC) Karachi.

Subject: One thousand three hundred forty two cases of endometrial curettage (EC) and 1832 hysterectomy specimens were examined.

Results: Out of 1342 cases of endometrial curettage (EC) 242 cases of hydatidiform mole and 5 cases of choriocarcinoma were seen, whereas out of 1832 hysterectomy specimens, 9 cases of invasive mole were seen.

Conclusion: Hydatidiform mole was found to be the commonest gestational trophoblastic disease.

KEY WORDS: Gestational trophoblastic disease (GTD), Endometrial curettage (EC), Hydatidiform mole (HM), Placental site trophoblastic tumor (PSTT).

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INTRODUCTION

Gestational Trophoblastic Disease (GTD) comprises a spectrum of interrelated conditions including molar pregnancy, invasive mole, placental site trophoblastic tumors and choriocarcinoma that have varying propensity for invasion and metastasis. Gestational trophoblastic tumors are uncommon solid tumors that are highly curable even with widespread dissemination.^{1,2}

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While Gestational trophoblastic tumor occur after molar gestation they may follow any pregnancy.³ The reported incidence of gestational trophoblastic disease varies dramatically among different regions of the world. The published data shows the prevalence 0.7 in Australia⁴ to 4.6 per thousand live births in Hawaii.⁵

A study was planned to examine the EC and hysterectomy specimens to determine the frequency of gestational trophoblastic disease in our patients and to correlate the results with other studies.

METHODS

One thousand three hundred forty two cases of EC and 1832 hysterectomy specimen received during the period January 1995 to December 2004 in the Department of pathology, basic medical Sciences Institute, Jinnah Postgraduate Medical Center, Karachi were reviewed. H/E stained glass slides were

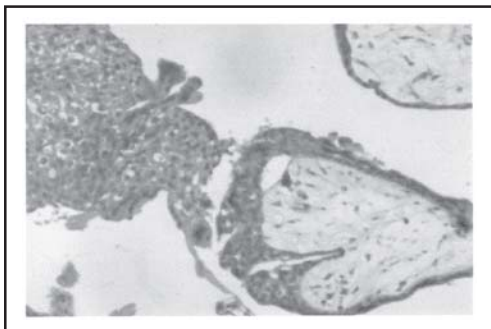


Fig-1: Photomicrograph of Hydatidiform mole (H/E x 200)

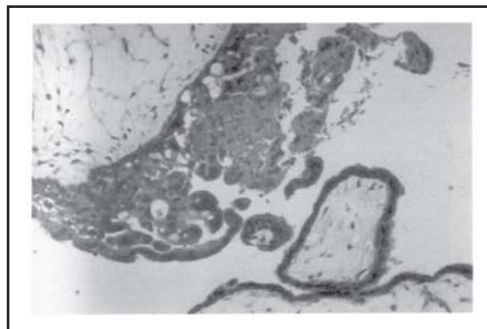


Fig-2: Photomicrograph of Hydatidiform mole (H/E x 200)

examined, all the cases of gestational trophoblastic disease identified, and the subtypes determined. In few cases special stains like Trichrome were employed to determine the invasive mole.

RESULTS

One thousand three hundred forty two cases of EC and 1832 hysterectomy specimens were examined. Out of these 256 cases of GTD were identified. They were further classified into the respective subtypes on the basis of microscopic criteria laid down by Paradinas.⁶

The commonest age group was found to be 21-30 years. Out of 256 cases of GTD the commonest was HM 242(94.5%). The second commonest was invasive Mole 9(3.5%) and the least common was Choriocarcinoma with 5(1.95%) cases. HM(Fig-1,2)was commonest in the age group of 21-30 yrs. Invasive mole (Fig-3,4) was the commonest in age group 31-40 and Choriocarcinoma(Fig-5,6) in age group 21-30 yrs (Table-I).

Out of 242 cases of HM, 172 (69.35%) were partial mole and 75(30.24%) were complete mole. Partial mole was commonest in age

Table-I: Correlation of frequency of GTD with various age groups.

Types of GTD	Age Groups				Total
	15-20	21-30	31-40	41-50	
Hydatidiform Mole	35	155	43	9	242
Invasive Mole	2	2	3	2	9
Choriocarcinoma	1	3	1	-	5
PSTT	-	-	-	-	-
Total	38	160	47	11	256

group 21-30 while complete mole was commonest in age group 41-50(Table-II).

DISCUSSION

Bagshaw has emphasized the importance of distinguishing a molar from normal conceptus by histopathology as the patients future depends on the distinction.⁷ There is also confirmatory evidence of influence of age on the incidence of gestational trophoblastic diseases.⁸

In our study highest frequency of gestational trophoblastic disease was found in the age group 21-30 years with the mean age of 27 years. The mean age (27 years) is in accordance with that reported by Mungan⁹ and Wasim.¹⁰

The commonest GTD was HM which constitute 242 (94.5%) cases. Of these partial moles were 172 (69.35%) and complete mole were 75(30.24%) cases. Nine (3.55%) cases of invasive mole were seen in 1832 cases of hysterectomy specimen examined whereas 5 (1.95%) cases of choriocarcinoma were seen in endometrial curettage examined.

Asian countries report the highest incidence of choriocarcinoma followed by Africa and Latin America, whereas Europe, Australia and USA generally report the lowest rate.¹¹ The

Table-II: Correlation of age group with frequency of complete and partial mole.

Age Group	Partial Mole	Complete Mole
15-20 yrs	22(8.8%)	11(4.4%)
21-30 yrs	81(32.6%)	30(12.9%)
31-40 yrs	57(22.9%)	18(7.2%)
41-50yrs	11(4.4%)	59(2.06)
Total	172(69.35%)	75(30.24%)



Fig-3: Photomicrograph of Invasive mole (H/E x 100)

incidence of choriocarcinoma is variable and given at 1,100,000 and 1,70,000 pregnancies in the West and 1250 and 1,6000 pregnancies in Asia.¹² According to a study at Liaquat Medical College Hyderabad by Mumtaz,¹³ the risk of choriocarcinoma after hydatidiform mole is about 2-4% which is thousand times greater than after a normal pregnancy. She also found that cancer is most likely to occur after complete mole.¹³

The prognosis of GTD depends on exact diagnosis and treatment. HCG level estimation is helpful in both diagnosis and follow up. Routine histopathology is advised in all cases

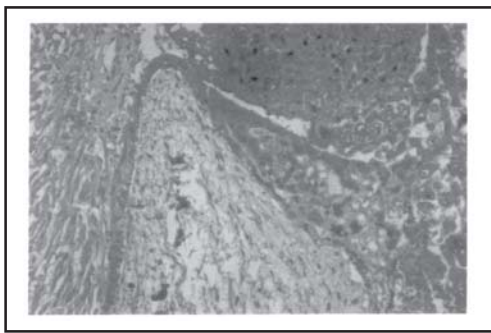


Fig-4: Photomicrograph of Invasive mole (H/E x 100)

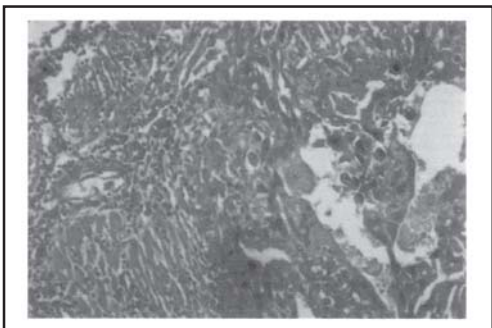


Fig-5: Photomicrograph of Choriocarcinoma mole (H/E x 100)

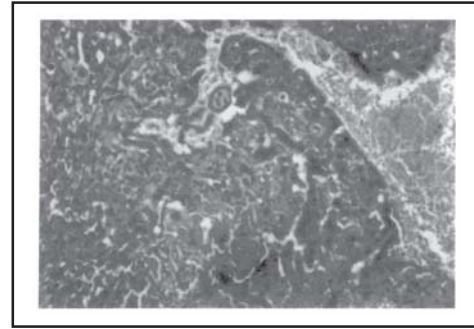


Fig-6: Photomicrograph of Choriocarcinoma mole (H/E x 100)

of EC to identify cases of gestational trophoblastic disease to determine the prognosis and future prospects of the patients.

REFERENCES

1. Bagshawe K. Risks and prognostic factors in trophoblastic neoplasia. *Cancer* 1976; 38:1373-85.
2. Goldstein DP, Berkovitz RS. Gestational trophoblastic neoplasms. *Clinical principles of Diagnosis and Management*, WB Saunders, Philadelphia 1982; 301.
3. Berkowitz RS, Goldstein DP. Management of molar pregnancy and trophoblastic tumors. In Knapp RC, Berkovitz RS (eds): *Gynecologic Oncology*, New York, Macmillan 1993; 2ed:38.
4. Olesnick G, Quinn M. Molar pregnancy after artificial insemination (donor). *Lancet* 1984; ii: 296.
5. Jacobs PA, Szulman AE, Funkhouse J. Human triploidy relationship between paternal origin of additional haploid component and development of partial hydatidiform mole. *Ann Hum Genet* 1982;46:223-31.
6. Paradinas F J. Pathology and classification of trophoblastic tumors. In Malcolm Coppleson(ed): *Gynecologic Oncology* 1992; 2:1013-25.
7. Bagshawe KD, Lawler SD, Paradinas FJ. Gestational Trophoblastic tumors following initial diagnosis of Partial mole. *Lancet* 1990; 335: 1074-6.
8. Bagshawe KD, Dent J, Webb J. Hydatiform mole in England and Wales 1973-1983. *Lancet* 1986; II: 673-7.
9. Mungan T. Kuscu E, Ugur M. Hydatidiform Mole: A clinical study analysis of 310 patients. *Int J Gyn Obs* 1996; 52(3): 233-6.
10. Wasim T. Gestational Trophoblastic Diseases a study. *Ann KE Med Coll* 2001; 7:129-30.
11. Bagshawe KD. Treatment of high risk choriocarcinoma. *J Reprod Med* 1984; 29:813-20.
12. Bracken MB. Incidence and etiology of Hydatidiform Mole: and epidemiological review. *Br J Obstet Gynecol* 1987; 199:1123-35.
13. Mumtaz F. Emergency Hysterectomy for Gestational Trophoblastic Tumors *J Coll Physicians Surg Pak* 1999; 9(6): 278-9.