

# Clinicopathological Features of Gestational Trophoblastic Neoplasia (GTN): Single Institutional Study

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## ABSTRACT:

**Introduction:** The term "gestational trophoblastic neoplasia" (GTN) refers to abnormal proliferation of trophoblastic tissue and occurs during pregnancy. It includes hydatiform mole, invasive mole, choriocarcinoma, placental site trophoblastic tumour and epithelioid trophoblastic tumour.

**Patients and Methods:** This retrospective study was conducted at the Department of radiology, Peoples Medical College, Hospital, Nawabshah, Shaheed Benazirabad, Sindh; the clinical & ultrasonographic records of biopsy-proven cases of gestational trophoblastic disease registered in the department from January 1, 2019, to December 31, 2020 was evaluated and analysed through SPSS.

**Results:** Total of 137 patients of biopsy proven gestational trophoblastic tumor was registered during the period. The age of the patient ranges between 15 to 50 years, the disease is most common in 21 to 30 years of age. Majority of patients belong to the rural areas (73%) in comparison to urban area (26%).The most common tumor was hydatiform mole (76%) followed by choriocarcinoma

**Conclusion:** Gestational trophoblastic neoplasia are common disease in females of 21 to 30 years of age and hydatiform mole is the most frequent tumor type

**Keywords:** Gestational trophoblastic disease, Hydatiform Mole, Malignancy, Ultrasound.

## INTRODUCTION

The term "gestational trophoblastic neoplasia" (GTN) refers to abnormal proliferation of trophoblastic tissue and occurs mostly during pregnancy. It includes hydatiform Mole, invasive Mole, choriocarcinoma, placental site trophoblastic tumor and epithelioid trophoblastic tumor.

Sonographic appearances of the extensive grape-like structure generated by widespread exuberant hydropic alterations identify the condition.<sup>5</sup>

The most prevalent symptom of GTD is painless vaginal bleeding, which is a good indicator of the disease.

The diagnostic criteria are hyperemesis, an enlarged uterus, toxemia before 20 weeks, and the absence of foetal components.<sup>6,7</sup>

There are observed differences in the rate of GTD occurrence between nations, spanning from 10/1000 births in Indonesian to 1/1000 pregnancies in the United States. Asia has the most considerable rate, followed by Africa and Latin America. In contrast, Europe, Australia, and the United States have the lowest percentage.<sup>9</sup>

Several studies have been undertaken in Pakistan to determine the incidence of GTD in Lahore and Karachi, with the goal of compiling epidemiologic studies data within those regions.

As a result, the current GTD investigation involves a clinicopathological evaluation as well as clinical connection. The purpose of this study is to analyse & determine clinicopathological features of gestational trophoblastic neoplasia referred in our institution.<sup>7</sup>

## PATIENTS AND METHODS

This retrospective study was conducted at the department of Oncology, Peoples Medical College, Hospital, Nawabshah, Shaheed Benazirabad, Sindh, The clinical records of biopsy proven cases of gestational trophoblastic disease registered in the department from January 1, 2019, to December 31, 2020 was evaluated and analysed through SPSS.

## RESULTS

Total of 137 patients of biopsy proven gestational trophoblastic tumor was registered during the period. The age of the patient

ranges as shown in the Chart I, the disease is most common in 21 to 30 years of age. Majority of patients belong to the rural areas (73%) in comparison to urban area (26%) as shown in Table II. The most common tumor was hydatiform mole (76%) followed by choriocarcinoma as shown in Table III.

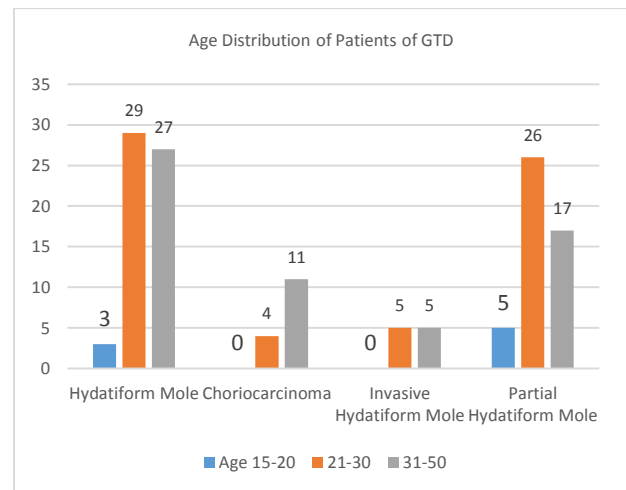


Chart 1: Age distribution of the patients of gestational trophoblastic tumor.

Table 1: Correlation of frequency of GTD with various age groups.

	Age 15-20	21-30	31-50
Hydatiform Mole	3	29	27
Choriocarcinoma	-	4	11
Invasive Hydatiform Mole	-	5	5
Partial Hydatiform Mole	5	26	17
PSTT	1	2	2

Table 2: Demographic distribution.

	Frequency	Percent(%)
Urban	36	26.3%
Rural	101	73.7%
Total	137	100

Table 3: Frequency of types of GTD in patients.

	Frequency	Percent (%)
Hydatiform Mole	81	76.
Choriocarcinoma	17	12.4
Invasive Hydatiform Mole	10	7.2
PSTT	5	5.0
Total	137	100

## DISCUSSION

GTD is a group of tumors and tumor-like diseases marked by the proliferation of pregnancy-related trophoblastic tissue that can proceed to cancer.<sup>9</sup> Because of discrepancies in technique, mole classification, case detection, and denominator definition, there were substantial geographical variations in the prevalence of GTD. The prevalence of GTD varies greatly over the world. The highest levels of t were found in Asia, Africa, and Latin America, with significantly lower levels in North America, Europe, and Australia.<sup>1-6</sup>

Asia, Africa, and Latin America have the greatest rates of choriocarcinoma, whereas Europe, Australia, and the United States have the lowest rates. Choriocarcinoma occurs in between 1,100,000 and 1,70,000 pregnancies in the West, and between 1250 and 1,6000 pregnancies in Asia. The outcome of GTD is determined on the accuracy of the care and prognosis. Estimating HCG levels is useful for both diagnosis and follow-up.

In all cases with EC, routine histopathology is recommended to identify cases of gestational trophoblastic illness and to establish the patients' prognosis and future prospects. The conventional therapy for women who may want to have children in the future is vacuum dilation with hysterectomy to remove the Mole (D&C). Women who no longer want to have children may be able to have their uterus removed, and tumours may require chemotherapy.<sup>3</sup>

In our study highest frequency of gestational trophoblastic disease was found in the age group 21-30, the commonest GTD was hydatiform mole with frequency of 29% and in the age group 31-50, hydatiform mole is also the commonest GTD with the frequency of 27%. Overall in 137 patients the most common GTD was hydatiform with frequency of 81%. PSTTs are extremely uncommon tumours. They are a unique type of GTD. out of 137 patients only in five patients PSTTs was observed. In the distribution of GTD according to the stage so that stage II was the most common of all with 79%.

## CONCLUSION

All categories of gestational trophoblastic disease have a higher prevalence of hydatidiform mole. In this investigation, the full hydatidiform mole was found to be the most prevalent kind. For diagnosis, serum beta hCG levels are the most sensitive and specific. Confirmatory diagnosis is aided by histopathological

testing. It is critical to keep track of these patients in order to find malignant trophoblastic tumours early and prevent mortality. In Pakistan, multi-centered studies are needed to ascertain the present evidence and overall evaluation of gestational trophoblastic disorders, which will aid in determining the disease's burden and producing the best possible outcome.

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