



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2658608>Available online at: <http://www.iajps.com>

Research Article

**TYPES AND FREQUENCY OF GESTATION TROPHOBLASTIC  
DISEASE**<sup>1</sup>Dr Areeba Sanaullah, <sup>2</sup>Dr Hamza Bhatti, <sup>2</sup>Dr Muhammad Talha Bhatti<sup>1</sup>Services Hospital Lahore, <sup>2</sup>Sughra Shafi Medical Complex Narowal.

Article Received: March 2019

Accepted: April 2019

Published: May 2019

**Abstract:**

**Objective:** This research work was conducted to assess the types and rate of the GTD (Gestation Trophoblastic Disease) in endometrial & hysterectomy samples obtained for evaluation with the help of histopathology.

**Methodology:** This research study carried out in pathology department of services Hospital, Lahore. Total 1342 patients suffering from EC (Endometrial Curettage) & examination of total 1832 samples carried out with the help of hysterectomy. The collection of the samples started in March, 2009 & last sample received in April 2018. The ethical committee of the hospital approved the conduction of research study. The examination of the H/E stained slides made of glass carried out. All the patients gave verbal consent to participate in this research work. SPSS v.15 was in use for the analysis of the collected results.

**Results:** Out of total patients suffering from EC, two hundred and forty-two patients were available with hydatidiform mole, out of total two hundred and forty-two patients of hydatidiform mole, 69.350% (n: 172) patients were available with partial mole & 30.240% (n: 72) patients were available with complete mole; chorio-carcinoma was present in 5 patients while among 1832 samples of hysterectomy, we found only 9 patients with invasive mole. The occurrence of chorio-carcinoma is not same at every place and provided at 1100000 & 170000 pregnancies in the countries of the West and 1250 & 16000 pregnancies in the continent of Asia.

**Conclusion:** The most common GTD diseases was hydatidiform mole in accordance with the findings of this research work.

**Key Words:** Endometrial, Mole, Suffering, Pathology, Conduction, Hysterectomy, Placental.

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Please cite this article in press Areeba Sanaullah et al., *Types and Frequency of Gestation Trophoblastic Disease.*, Indo Am. J. P. Sci, 2019; 06(05).

**INTRODUCTION:**

GTD (gestational trophoblastic disease) contains a band of interconnected illnesses consisting molar pregnancy, trophoblastic tumors of placental location, invasive mole & chorio-carcinoma that all have changing tendency for the metastasis & invasion. Trophoblastic tumors during pregnancy period are very infrequent tumors in solid shape that are mostly preventable even after the time of extensive propagation [1, 2]. Whereas the trophoblastic tumors in pregnancy period usually occur later molar pregnancy, but they have the ability to follow any pregnancy of female [3]. The concluded occurrence of GTD is different in various regions of the world.

The authentic information of the same subject displays the incidence of 0.70 in the country of Australia [4] to 4.60 per 1000 live child births in Hawaii [5]. The incidence in the later country is much high. So, the planning of a research work carried out to check the endometrial curettage & samples of hysterectomy to find out the rate of the GTD in the patients of our region and this study also aimed to associate the results of this current study to the results of other previous research works.

**METHODOLOGY:**

Total 1342 patients with confirmed endometrial curettage [EC] and one thousand eight hundred and thirty-two samples of hysterectomy gathered during this study period. The collection of the samples started in March, 2009 to April 2018. This research work carried out in pathology department of services Hospital, Lahore. We reviewed all the information of these samples in this department. Ethical committee of Services Hospital gave the permission to conduct

this research work. The examination of the H/E stained slides made of glass carried out.

The identification of all the patients suffering from GDT carried out and after that we performed the determination of the serotypes of the disease. In a small amount of patients, the employment of distinct stains as Trichrome carried out to find out the presence of invasive mole. Initially all the information was present in the medical files of patients, we entered all the record of the patients in computer. The SPSS V.15 was in use for the analysis of the collected information.

**RESULTS:**

The examination of total 1342 patients with confirmed endometrial curettage & one thousand eight hundred and thirty-two samples of hysterectomy carried out in this research work. Out of total patients the diagnosis of two hundred and fifty-six patients with gestational trophoblastic disease carried out. Further classification of these patients carried out into subtypes depending upon the microscopic standard. Paradinás gave the microscopic criteria for the classification into their subtypes [6]. The most common group of age was consisting the patients from twenty-one to thirty year of age. Out of total patients suffering from gestational trophoblastic diseases, the most common was the hydatidiform mole available in 94.50% (n: 242). The 2<sup>nd</sup> most frequent was the invasive mole present in 3.50% (n: 9) patients & the least frequent was the chorio-carcinoma present in 1.950% (n: 5) patients. hydatidiform mole (Figure-1 & Figure-2) was most frequent in the patients having the age of twenty-one to thirty year of age.

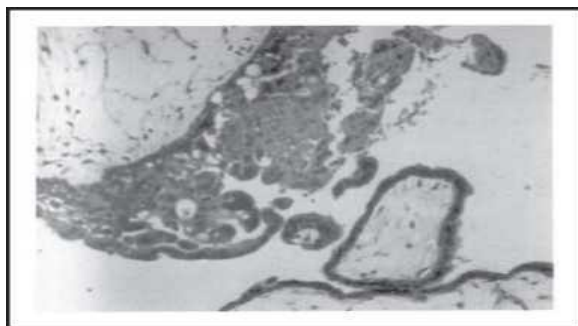


Fig-1: Photomicrograph of hydatidiform mole (H/E x 200)



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

Invasive mole (Figure-2 & Figure-3) was very frequent in the patients having the age of thirty-one to forty year of age.



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

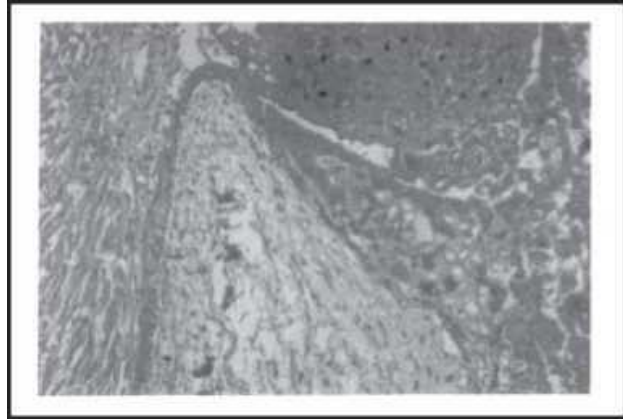


Fig-4: Photomicrograph of Invasive mole (H/E x 100)

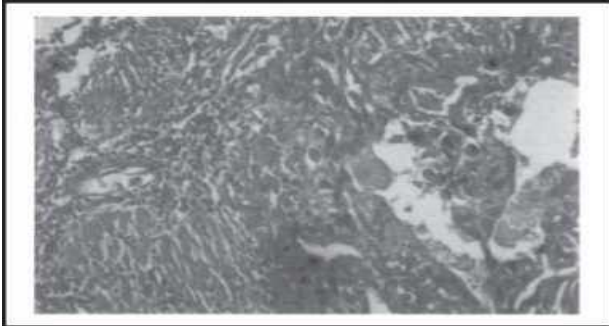


Fig-5: Photomicrograph of Choriocarcinoma mole  
Choriocarcinoma mole (H/E x 100)

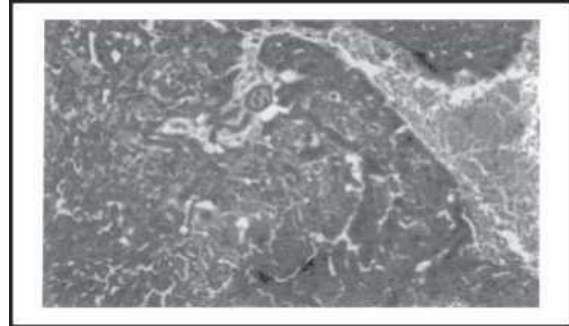
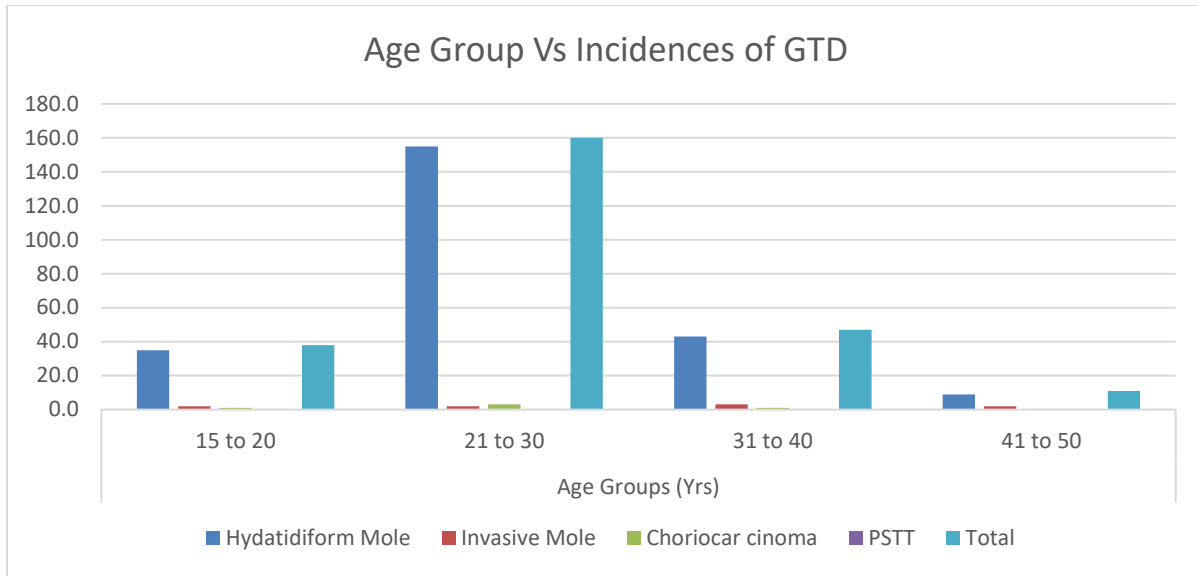


Fig-6: Photomicrograph of (H/E x 100)

Chorio-carcinoma (Figure-5 & Figure-6) was most common in the patients having the age from twenty-one to thirty years as available in Table-1.

**Table-I: Correlation of Frequency of GTD with Various Age Groups**

| Types of GTD      | Age Groups (Yrs) |          |          |          | Total |
|-------------------|------------------|----------|----------|----------|-------|
|                   | 15 to 20         | 21 to 30 | 31 to 40 | 41 to 50 |       |
| Hydatid form Mole | 35.0             | 155.0    | 43.0     | 9.0      | 242.0 |
| Invasive Mole     | 2.0              | 2.0      | 3.0      | 2.0      | 9.0   |
| Choriocar cinoma  | 1.0              | 3.0      | 1.0      | -        | 5.0   |
| PSTT              | -                | -        | -        | -        | -     |
| Total             | 38.0             | 160.0    | 47.0     | 11.0     | 256.0 |

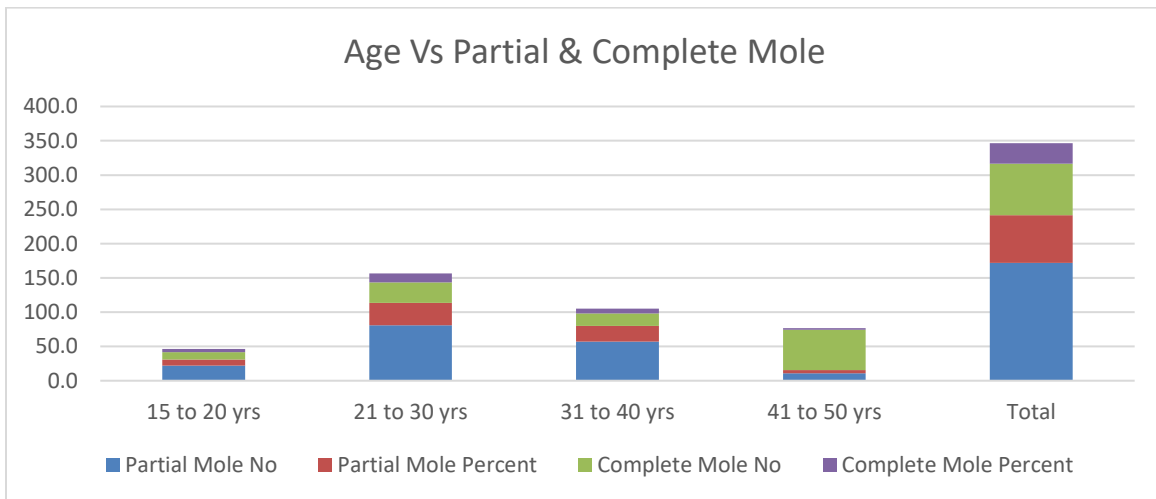


Out of total two hundred and forty-two patients of hydatidiform mole, 69.35% (n: 172) patients were available with partial mole & 30.24% (n: 72) patients were available with complete mole. We found that the prevalence of partial mole was more

common in the age group of twenty-one to thirty year of age whereas the prevalence of the complete mole was more frequent in the age group of forty-one to fifty year of age as described in Table-2.

**Table-II: Age Group Relationship with Frequency of Complete and Partial Mole**

| Age Group    | Partial Mole |         | Complete Mole |         |
|--------------|--------------|---------|---------------|---------|
|              | No           | Percent | No            | Percent |
| 15 to 20 yrs | 22.0         | 8.80    | 11.0          | 4.40    |
| 21 to 30 yrs | 81.0         | 32.60   | 30.0          | 12.90   |
| 31 to 40 yrs | 57.0         | 22.90   | 18.0          | 7.20    |
| 41 to 50 yrs | 11.0         | 4.40    | 59.0          | 2.06    |
| Total        | 172.0        | 69.35   | 75.0          | 30.24   |



**DISCUSSION:**

Bagshaw has highlighted the significance of a molar distinction from normal conceptus with the help of the histopathology because future of the patient is depending upon this distinction [7]. There is a confirm proof according to different findings about the impact of the age on the prevalence of GTDs [8]. In this current research work, the greatest frequency of GTD was present in the age group of twenty-one to thirty year of age with an average age of twenty-seven years. This average age of twenty-seven years was according to the concluded mean age by Mungan [9] & Wasim [10]. The most common gestational trophoblastic disease was hydatidiform mole which was present in 94.50% (n: 242) patients of this research work. Out of 242 patients of hydatidiform mole, 69.35% (n: 172) patients were suffering from partial moles & patients of the complete mole were 30.240% (n: 75) cases. Total 3.55% (n: 9) patients of invasive mole were available in 1832 samples which underwent hysterectomy examination while 1.950% (n: 5) patients of chorio-carcinoma were also available in the examination of EC.

The countries of Asia reported the greatest prevalence of chorio-carcinoma. This prevalence followed by countries of Africa & Latin America while the lower rate of this complication was available in the countries of Europe, Australia & United States of America [11]. The occurrence of chorio-carcinoma is not same at every place and provided at 1100000 & 170000 pregnancies in the countries of the West and 1250 & 16000 pregnancies in the continent of Asia [12]. In accordance with another research work conducted in a medical college of Hyderabad a big city of Sindh [13], the danger of the chorio-carcinoma after HM is from 2% to 4% which is many thousand times higher than after the process of normal pregnancy. This research work also found that there is a probability for the occurrence of cancer after the complete mole [13].

The judgement about the recovery from the gestational trophoblastic disease is totally depending upon the proper detection of the disease as well as its treatment. The estimation of the levels of HCG is very vital in the treatment as well as diagnosis of the disease. It is very important to use the routine histopathology in all the patients to detect the patients of GTD to find out the process of recover from this disease & the future outcomes on the patients

suffering from this complication of gestational trophoblastic disease.

**CONCLUSION:**

Gestational trophoblastic disease can cause many complications in which most disease of GTD is HM as discovered by this research work. Partial mole in HM was the most prevalent complication. It is the responsibility of the health authorities to manage the new technology and test methods for the correct diagnosis and the treatment of such diseases to prevent the high rate of morbidity & mortality in our population.

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