

HYDATIDIFORM MOLE IN GOMBE: A FIVE YEAR HISTOPATHOLOGICAL REVIEW

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ABSTRACT

Objective: The purpose of this study is to do a histopathological review of all cases of hydatidiform moles seen in pathology department of Federal Medical Centre, Gombe between June 2000 and May 2005.

Methods: All the relevant request forms, slides and paraffin embedded tissue blocks were retrieved. The slides stained with routine Haematoxylin and Eosin were then reviewed.

Results: Thirty four cases of hydatidiform moles were studied and these formed 7.5% of all products of conception seen during the review period. There were 18 cases of complete hydatidiform mole and 16 cases of partial hydatidiform mole. No invasive or tubal mole was seen during this period. The frequency of hydatidiform moles was 1 in 166 deliveries. The age range for all the molar pregnancies was 15-44 years with vaginal bleeding as their leading mode of presentation between 11-18 weeks of gestation.

Conclusion: Molar gestation was found to be a common gynaecological problem in Gombe affecting women mainly in their third decade of life.

Key Words: Hydatidiform Mole; Histopathological Review

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INTRODUCTION

Molar pregnancies affect women of childbearing age and when complicated leads to increased risk of mortality¹. Early diagnosis and prompt treatment is of paramount importance because they may precede choriocarcinoma, which is its highly malignant counterpart.

The correct recognition of true moles depends on accurate histological diagnosis. Frequent histological review with appropriate and uniform criteria for the diagnosis of moles is therefore necessary to minimize incorrect diagnosis.

Hydatidiform mole is an abnormal conception that exhibits vesicular or cystic swelling of chorionic villi associated with variable trophoblastic hyperplasia.² Moles have been found to occur at any age during active reproductive life, but the risk is higher in pregnant women in their teens or between the ages of 40 and 50 years.^{3,4} The incidence of molar gestation varies in different regions of the World: 1 in 1000 pregnancies in the United States,⁴ 1 in 100 pregnancies in Indonesia,⁴ 1 in 314 pregnancies in Iran⁵ and 1 in 205 pregnancies in Ibadan, Nigeria.⁶ The commonest mode of presentation is abnormal uterine bleeding with passage of bits of grape-like

vesicles.⁷ The symptoms of pregnancy are usually, exaggerated and ultrasound examination can be diagnostic. Human chorionic gonadotrophin (hCG) levels are greatly increased.

Molar gestations are usually classified into three namely: Complete hydatidiform mole (CHM), partial hydatidiform mole (PHM), and Invasive mole (IM). The histologic features of various forms of molar pregnancies vary.⁸ Histologic reviews in Charing Cross Hospital London by Paradinas have shown that first trimester non-molar hydropic abortions and CHMs are often erroneously called PHMs by pathologists.⁹ CHM and PHM have widely different prognosis and therefore require very accurate diagnostic criteria for their recognition.

The purpose of this study is to histologically review all cases of hydatidiform moles seen in the pathology department of Federal Medical Centre, Gombe between June 2000 and May 2005, and compare the findings with other studies.

MATERIALS AND METHODS

This five-year retrospective histopathological analysis was done in Federal Medical Centre Gombe for cases seen between June 2000 to May 2005. This hospital is a referral centre for hospitals in Gombe, Taraba, Adamawa, Bauchi and parts of Yobe States.

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The bench books were used to identify the histology numbers and subsequently used these numbers to retrieve the relevant request forms, slides, and tissue blocks. All sections were stained with standard haematoxylin and Eosin. Cases were reviewed and characterized using the histologic features published by Gehrig and Van Lee.¹⁰ Patients age, gestational age, clinical features and type of tissue submitted were amongst the information extracted from the request cards. Cases that did not fulfil the diagnostic criteria and cases whose slides and tissue blocks could not be retrieved were eliminated from the study. Grading of various histopathological appearances was done.

RESULTS

A total of 455 products of conception were diagnosed during the review period out of which 34 cases were molar gestations. This constituted 7.5% of all products of conception recorded.

Complete hydatidiform moles (CHM) were 18 while Partial hydatidiform moles (PHM) were 16 in number. No case of invasive mole or tubal mole was recorded during the review period-Table 1.

Request forms were used to obtain the age and clinical information of the patients. The age range for all cases was 15-44 years, with a mean of 26.5 years. The peak incidence was between 20-30 years with 15 cases. See Table 2.

Seventeen (50%) of the 34 cases submitted were labelled molar tissues (grape-like vesicles), while 9 (26.5%) were labelled products of conception and the remaining 8 as endometrial curettings.

Table 3 shows the various clinical presentations. Over 65% of cases presented with various forms of vaginal bleeding. Passage of vesicles was seen in 40.6% of cases out of which over 60% were CHM. Pre-eclampsia and hyperemesis gravidarum were slightly more frequent in CHM than PHM.

Table 4 reveals the gestational age (GA) distribution. GA was available in 30 of the 34 cases. None of the cases had a GA of less than seven weeks. Twenty (65.4%) cases were between 11-18 weeks gestation.

Table 1: **Histological Classification of 34 Cases Of Molar Gestations.**

Type of Mole	Number	Percentage
Complete hydatidiform mole	18	52.9%
Partial hydatidiform mole	16	47.15
Invasive mole	00	0.0%
Total	34	100

Table 5 and 6 show the grades of histological features of CHM and PHM respectively. Over 50% of cases of CHM showed mild to moderate degrees of variation in shapes and sizes of chorionic villi (CV) as opposed to PHM which had over 50% cases with marked variation in shapes and sizes of CV.

Trophoblastic hyperplasia was marked in 50% of CHMs while 50% of PHM showed moderate hyperplasia. Stromal fibrosis of CV was seen in moderate to high grades in over 85% of PHMs as opposed to 16.6% in CHMs. High grades of Hydropic degeneration occurred in over 65% of CHMs while this occurred in only 16% of PHMs. Trophoblastic atypia; inflammation, Haemorrhage, fibrin deposition, dystrophic calcification, and necrosis were predominantly in low grades in both types of moles.

Figure 1: **Complete Hydatidiform Mole Showing Marked Trophoblastic Hyperplasia**

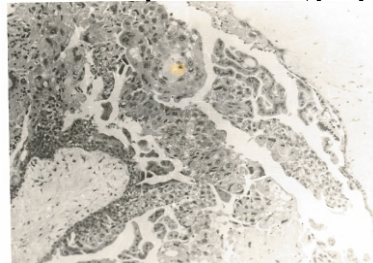


Figure 2: **Partial Hydatidiform Mole Showing Stromal Fibrosis With Focal Trophoblastic Hyperplasia**

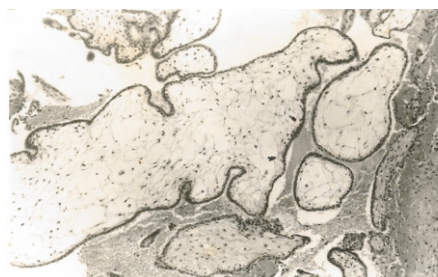


Table 2: Age Distribution And Types of Tissue Submitted For 34 Cases Of Mole

Age range (yrs)	No of Cases	Types of tissue submitted		
		Molar tissues	POC	EC
15 -19	7	3	2	2
20 -24	7	4	2	1
25 -29	8	3	1	4
30 -34	7	4	3	0
35 -39	2	1	0	1
40 -44	3	2	1	0
45 -49				
Total	34(100%)	17(50%)	9(26.5%)	8(23.5%)

Table 3: Clinical Presentation of 32 Cases Of Mole

Clinical Feature	Frequency			Total (%)
	CHM	PHM		
Vaginal bleeding	11	10		21(65.6%)
Hyperemesis gravidarum	3	2		5(15.6)
Pre-eclampsia	3	1		4(12.5)
Passage of Vessicles	8	5		13(40.6)
Abdominal Pain	2	2		4(12.5)
Post-abortion bleeding	2	1		3(9.4)
Post-partum bleeding	0	1		1(3.13)

Table 4: Gestational Age Distribution For 29 Cases Of Moles

Gestational age (wks)	Frequency			Total (%)
	CHM	PHM		
7-10	2	3		5(17.2)
11-14	7	6		13(44.8)
15-18	4	2		6(20.6)
19-22	2	1		3(10.3)
23-26	1	1		2(6.9)
	16	13		29(100)

Table 5: Histological Features of 18 Cases of CHM

Histological features	Grades			Total
	I	II	III	
Variation in shapes and sizes of CV	10	6	2	18
Trophoblastic hyperplasia	3	6	9	18
Trophoblastic atypia	11	4	3	18
Inflammation	11	5	2	18
Hydropic degeneration	3	3	12	18
Haemorrhage	9	5	4	18
Fibrin deposition	10	4	4	18
Necrosis	14	2	1	18
Stromal fibrosis of CV	15	2	1	18
Dystrophic Calcification	13	3	2	18

Table 6: Histological features of 16 cases of PHM

Histological features	Grades			Total
	I	II	III	
Variation in shapes and Sizes of Cv	3	3	10	16
Trophoblastic hyperplasia	3	9	4	16
Trophoblastic atypia	12	3	1	16
Inflammation	10	4	2	16
Hydropic degeneration	8	5	3	16
Haemorrhage	7	6	3	16
Fibrin deposition	9	4	3	16
Dystrophic calcification 1	4	1	1	16
Necrosis	13	2	1	16
Stromal fibrosis of Cv	2	8	6	16

DISCUSSION

Thirty four cases of molar gestations were studied and his constituted 7.5% of all the products of conception reviewed in the department during the review period. This was close to 8.4% recorded in Zaria.⁷

In trying to determine the frequency of moles, the total number of molar pregnancies were compared with total number of deliveries conducted in Federal Medical Centre (FMC) Gombe. During this review period, 5,642 women were delivered in Federal Medical Centre Gombe.

This gives a frequency of 1 in 166 deliveries. This is much higher than 1 in 625 deliveries and 1 in 623 deliveries seen in Zaria⁷ and Calabar¹¹ respectively. This may be due to the fact that more molar gestation and specimens are likely to be referred to Federal Medical Centre Gombe from other hospitals than deliveries.

The age range for all the cases was 15-44 years. This is similar to 15- >40years and 15-45 years reported in other parts, of Nigeria.^{12,13} The mean age of 26.5 years is close to 25.7 years reported in Zaria.⁷ The peak incidence occurred in the third decade of life which fall within the same range seen in parts of Nigeria¹² and California.¹⁴ This however differs from far East reports where patients over 40years of age were most prone to develop this disease. It is very likely that genetic and environmental factors could be responsible for this variation, since early marriage is common to both Nigeria and Far east¹⁵. Vaginal bleeding was the presenting complain in over 65% of cases. This is close to 60% reported by Ogunbode,⁶ and lower than 85% and 90% reported by Ayangade¹³ and Egwatu/Ozumba¹⁶ respectively. Passage of vesicles was seen in over 40% of cases which is higher than 27% reported by Ayangade.¹³

Over 65% of cases were between 11 18 weeks of

gestation. This is similar to 67% reported in Zaria.⁷ Histopathological features were carefully examined and graded from grade I to III. Similar histological grading of moles was done by other workers in Nigeria,^{7,17} Britain¹⁸ and Iran.⁵ Most workers however limited their grading to trophoblastic hyperplasia and atypia. Moderate to severe trophoblastic hyperplasia was seen in over 50% of cases of both PHM and CHM respectively. This is similar to the 50% reported by Junaid¹⁷ but is however lower than 60% and 80% reported in Iran⁵ and Zaria⁷ respectively. Over 30% of cases of CHM and less than 20% of PHM showed moderate to severe trophoblastic atypia. This is close to reports in Nigeria¹⁷ and Britain.¹⁸ Hydropic degeneration of CV was a more prominent feature in CHM (>60%) as opposed to stromal fibrosis of CV which was more prominent in PHMs (>70%). Variation in shapes and sizes of CV was also more prominent in PHMs.

The least prominent features in all the cases of hydatidiform moles were necrosis, dystrophic calcification, inflammation, and fibrin deposition. These variations between CHM and PHM support the descriptions in various literature.^{19,20,21} In conclusion, this review has demonstrated that molar gestation is a common problem in North-eastern Nigeria and affects only women in their reproductive age mainly during the third decade of life. This agrees with the findings of other workers in North-Central,¹² South-west,¹³ and south-eastern¹¹ Nigeria and Eastern Africa.²² Trophoblastic hyperplasia and atypia were more prominent in our cases than previous reports.^{18,23} This could be due to non-uniformity in the grading criteria. Interdisciplinary research on clinico-pathology, genetics and molecular biology of this disease will be of great benefit and will lead to reduction in morbidity and mortality.

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