DOI: https://doi.org/10.53350/pjmhs020231711566

ORIGINAL ARTICLE

Frequency of Common Clinical Presentation in patients with Molar Pregnancy in Gomal Medical College, Dera Ismail Khan, Pakistan

NAJMA BIBI[1], IRUM BATOOL HASHMI[1]*, SOBIA AHMAD[1], NEELAM MEHSOOD[1], NASEEM SABA[1], SHAZIA BIBI[1]
[1]*Department of Obstetrics and Gynaecology, Gomal Medical College, D.I. Khan, Pakistan*
Correspondence to: Najma Bibi, Email: batool_irum@yahoo.com

ABSTRACT

Introduction: Hydatidiform mole, frequently referred to as molar pregnancy, represents the most prevalent and benign variant of gestational trophoblastic disease. The occurrence rate of molar pregnancy exhibits significant geographical variability, ranging from one in every one hundred and fifty live births in Southeast Asia to one in every one thousand and five hundred pregnancies in the United States. This study identifies the most commonly presenting clinical features of molar pregnancy. The results will help clinicians in early diagnosing of molar pregnancy and prompt management.

Material and Method: The study was carried out in the Obstetrics and Gynecology Unit at MTI Gomal, located in DI Khan. The timeframe allocated for this study spanned one year, commencing on the 14th of June 2022 and concluding on the 13th of December 2022. Sample Size was 139 patients that were diagnosed and managed as cases of Molar pregnancy. Sampling Technique was convenience sampling or Non probability purposive and study design was descriptive study

Results: Within the scope of this research, a total of 139 patients diagnosed with molar pregnancy were meticulously observed in the obstetrics and gynecology department. Various clinical outcomes were identified and followed and hence put to further management. In these 139 patients the age range was from 18-48 years. It was found that the majority of the patients were complete moles. Abnormal vaginal bleeding emerged as the predominant clinical manifestation of molar pregnancy, being documented in 62 (44.6%) of the patients evaluated.

Conclusion: Targeting these various clinical outcomes and close surveillance will then help in improving mortality and morbidity from molar disease.

Keywords: Molar Pregnancy, Abnormal vaginal bleeding, Hyperemesis, Theca Lutein cysts, Hyperthyroidism.

INTRODUCTION

Gestational trophoblastic diseases (GTD) encompass a category of gestational neoplasms arising from the aberrant proliferation of trophoblastic epithelial cells within the placenta.[1] These pathological entities encompass epithelioid trophoblastic tumor, choriocarcinoma, and hydatidiform mole. Hydatidiform mole represents the predominant variant and is typically classified as benign, although it may, in certain instances, exhibit pre-malignant characteristics. Gestational trophoblastic disease (GTD) is categorized into benign manifestations such as partial and complete hydatidiform mole, as well as malignant variants including epithelioid trophoblastic tumors, choriocarcinomas, and invasive moles. A multitude of factors, including genetic predisposition, environmental influences, and socioeconomic conditions, contribute to the etiology of molar pregnancies.[2] A population-based investigation conducted in the Netherlands indicates that the annual incidence of this condition is 1.67 cases per one thousand deliveries each year.[3] The incidence are more common in regions like Latin America, Southeast Asia, Africa, and the Caribbean comprising about one per hundred to one per two hundred in these developing countries while in developed countries, however, the incidence is much lower of about one per two thousand to one per three thousand pregnancies. Molar pregnancies can also occur ectopically, though less frequently, include heterotrophic, ovarian and tubal molar pregnancies.[4]

The clinical manifestations associated with molar pregnancy encompass hyperemesis gravidarum, disproportionate uterine enlargement, hyperthyroidism, and the presence of ovarian theca lutein cysts. Human chorionic gonadotropin (hCG) concentrations are markedly elevated in these instances.[5] A research study conducted in Saudi Arabia revealed that vaginal bleeding was the predominant symptom, occurring in 86.4% of cases, followed by hyperemesis gravidarum (41%) and theca lutein cysts (13.6%). The majority of patients (63.6%) demonstrated normal hCG levels within 9 weeks post-suction curettage[6], and 10% experienced hyperthyroidism.[7]Sonographically, partial moles show a normal or minimally cystic placenta, gestational sac showing fine septa within it while complete moles exhibit avascularity, larger gestational sacs, and abnormal placental tissue and can be diagnosed more often before operation.[8] Diagnosis of molar pregnancy typically involves pelvic ultrasound, beta-hCG levels, and histopathological analysis. Management usually involves suction evacuation, although pharmacological treatment with methotrexate is sometimes used.[9] In rare cases, partial molar pregnancies can result in a triploid fetus or, extremely rarely, a normal diploid karyotype.[10]

Objectives: The objective of the present investigation was to examine the diverse clinical characteristics and management approaches pertinent to molar pregnancies. By identifying the most commonly presenting symptoms, the study aimed to enhance early diagnosis and improve clinical outcomes. Limited research has been conducted in Khyber Pakhtunkhwa (KPK), especially in Dera Ismail Khan, in this area. The findings of this study will assist clinicians in promptly identifying molar pregnancy cases, allowing for early and appropriate management. This research will also lay the foundation for future studies on the subject. Ultimately, the goal was to help obstetricians and gynecologists in the timely detection, thorough investigation, and effective management of molar pregnancies, leading to a significant reduction in the morbidity and mortality rates associated with this condition.

MATERIALS & METHODS

This investigation was structured as a descriptive cross-sectional study and conducted at the Gynae/Obs outpatient department of MTI Gomal, Dera Ismail Khan, from June 14, 2022, to December 13, 2022. The sample size was determined to be 139, utilizing a 10% prevalence of hyperthyroidism, a 95% confidence interval, and a 5% margin of error, in accordance with the World Health Organization's formula for sample size determination. Participants were selected through non-probability convenience sampling. The inclusion criteria for the study were female patients aged 18 to 48 years, those presenting with molar pregnancy diagnosed through ultrasound (whether complete or partial mole), and patients with a past record of molar pregnancy at MTI Gomal, D.I.KHAN. The exclusion criteria encompassed individuals who expressed unwillingness to participate, those outside the specified age range of 18 to 48 years, and patients experiencing life-threatening complications subsequent to molar pregnancy, and those with normal pregnancy, epithelioid trophoblastic tumors, trophoblastic tumors of the implantation site, choriocarcinomas, or invasive moles.

Received on 15-08-2023
Accepted on 09-10-2023

Data Collection Procedure: After synopsis approval, the study was conducted in the Obstetrics/Gynecology OPD at MTI Gomal, Dera Ismail Khan. Patients meeting the inclusion criteria were identified. The procedure was explained to the patients, and informed consent was obtained. Detailed history related to molar pregnancy was collected, followed by a relevant physical examination. Laboratory tests, including beta-hCG, CBC, RFTs, LFTs, and TFTs, were performed. Treatment was provided either through dilatation and curettage or medical treatment with methotrexate and folic acid. Blood transfusion was performed if necessary, and in severe cases, total hysterectomy was done. Additionally, hospital records of patients with molar pregnancy were included.

Data Analysis Procedure: The data obtained were systematically entered into SPSS version 26 for comprehensive analysis. Descriptive statistical measures, including frequency and percentage, were computed for qualitative variables (e.g., type of molar pregnancy, abnormal vaginal bleeding, hyperemesis gravidarum, theca lutein cysts, hyperthyroidism). Quantitative variables (such as age and gestational age) were represented as mean ± standard deviation. Clinical manifestations were stratified according to age, gestational age, and type of molar pregnancy to ascertain any potential effect modification, employing the chi-square test. A p-value of less than 0.05 was deemed statistically significant.

RESULTS

In this investigation, a cohort of 139 women diagnosed with molar pregnancy, encompassing both complete and partial forms, was analyzed via ultrasound imaging. The subjects were stratified by age, with a predominant proportion (70 women, 51.1%) situated within the 25 years or younger demographic. A smaller proportion, 63 women (45.3%), were in the 26-35 year age range, and only 5 women (3.6%) were older than 35 years. The age spectrum of the participants ranged from 18 to 48 years, yielding a mean age of 25.39 years ± 5.2 SD (Table1). Among the patients, 112 (80.58%) had complete molar pregnancy, while 27 (19.42%) had partial molar pregnancy(Table 2).

Table 1. Age distribution

	Frequency	Percnet	Mean + SD
<= 25	71	51.1	
26-35	63	45.3	25.39 years
36+	5	3.6	+5.2
Total	139	100.0	

Table 2. Type of molar pregnancy.

Type of molar pregnancy	Count	Percentage
Complete	112	80.58%
Partial	27	19.42%

Table 3. Common Clinical presentation in patients with molar pregnancy

		Count	Table n %
Abnormal Vaginal Bleeding	Yes	62	44.6%
	No	77	55.4%
Hyperemesis Gravidarum	Yes	28	20.1
	No	111	79.9%
Passage of Grape Like Vesicles	Yes	32	23.0%
	No	107	77.0%
Theca Lutein Cysts	Yes	15	10.8%
	No	124	89.2%
Hyperthyroidism	Yes	19	13.7%
	No	120	86.3%

Concerning the clinical manifestations associated with molar pregnancy, abnormal vaginal bleeding emerged as the most prevalent symptom, documented in 62 patients (44.6%), followed by the expulsion of grape-like vesicles in 32 individuals (23%), and hyperemesis gravidarum, which was recorded in 28 patients (20.1%). The presence of theca lutein cysts was noted in 15 patients (10.8%)(Table3).

Table 4. Stratification of common clinical features over age

Variable	Response	≤25 years n (%)	26–35 years n (%)	≥36 years n (%)	p-value
Abnormal Vaginal Bleeding	Yes	30 (42.3%)	29 (46.0%)	3 (60.0%)	0.708
	No	41 (57.7%)	34 (54.0%)	2 (40.0%)	
Hyperemesis Gravidarum	Yes	15 (21.1%)	11 (17.5%)	2 (40.0%)	0.461
	No	56 (78.9%)	52 (82.5%)	3 (60.0%)	
Passage of Grape-Like Vesicles	Yes	15 (21.1%)	16 (25.4%)	1 (20.0%)	0.831
	No	56 (78.9%)	47 (74.6%)	4 (80.0%)	
Theca Lutein Cysts	Yes	8 (11.3%)	7 (11.1%)	0 (0.0%)	0.730
	No	63 (88.7%)	56 (88.9%)	5 (100.0%)	
Hyperthyroidism	Yes	11 (15.5%)	7 (11.1%)	1 (20.0%)	0.698
	No	60 (84.5%)	56 (88.9%)	4 (80.0%)	

Table 5. Stratification of common clinical features over type of molar pregnancy

Variable	Response	Complete Mole n (%)	Partial Mole n (%)	p-value
Abnormal Vaginal Bleeding	Yes	47 (42.0%)	15 (55.6%)	0.202
	No	65 (58.0%)	12 (44.4%)	
Hyperemesis Gravidarum	Yes	25 (22.3%)	3 (11.1%)	0.192
	No	87 (77.7%)	24 (88.9%)	
Passage of Grape-Like Vesicles	Yes	25 (22.3%)	7 (25.9%)	0.690
	No	87 (77.7%)	20 (74.1%)	
Theca Lutein Cysts	Yes	10 (8.9%)	5 (18.5%)	0.149
	No	102 (91.1%)	22 (81.5%)	
Hyperthyroidism	Yes	12 (10.7%)	7 (25.9%)	0.039
	No	100 (89.3%)	20 (74.1%)	

Table 6. Stratification of common clinical features over gestational age.

Variable	Response	≤15.0 weeks n (%)	≥16.0 weeks n (%)	p-value
Abnormal Vaginal Bleeding	Yes	34 (44.7%)	28 (44.4%)	0.972
	No	42 (55.3%)	35 (55.6%)	
Hyperemesis Gravidarum	Yes	12 (15.8%)	16 (25.4%)	0.160
	No	64 (84.2%)	47 (74.6%)	
Passage of Grape-Like Vesicles	Yes	20 (26.3%)	12 (19.0%)	0.311
	No	56 (73.7%)	51 (81.0%)	
Theca Lutein Cysts	Yes	9 (11.8%)	6 (9.5%)	0.661
	No	67 (88.2%)	57 (90.5%)	
Hyperthyroidism	Yes	11 (14.5%)	8 (12.7%)	0.762
	No	65 (85.5%)	55 (87.3%)	

When stratified by age, the clinical features showed no significant differences(Table4). Similarly, when stratified by the type of molar pregnancy, most clinical features were insignificant, except for hyperthyroidism, which showed a significant result, although this might be due to the small sample size(Table5). When

stratified by gestational age, no significant differences were found, although the common features were more prevalent in women with a gestational age greater than 15 weeks(Table6).

DISCUSSION

Molar pregnancy (MP) remains an uncommon yet still poorly understood disorder, although its clinical presentation has evolved significantly over the past few decades. Early diagnosis and effective treatment regimens have led to a decrease in complication rates in developed countries. Complete moles, now typically diagnosed early through clinical or ultrasound criteria, result in fewer severe complications. Standard protocols for managing persistent gestational trophoblastic disease have improved, with cure rates approaching 100%. The prevalence of molar pregnancy exhibits global variability attributable to discrepancies in reporting methodologies, classifications of moles, and mechanisms of case detection; however, recent trends indicate a worldwide reduction in its prevalence. For instance, in Saudi Arabia, the incidence has decreased from one in 446 and one in 676 pregnancies [11,12] in 1988 to 0.9 per 1,000 pregnancies by 2016.[13] Comparable reductions have been documented in South Korea, where the incidence diminished from 4.4 per 1,000 pregnancies during the 1960s to 1.6 in the 1990s, as well as in Eastern Nepal, where it decreased from 4.17 to 2.58 per 1,000 pregnancies. [15]

Numerous risk factors associated with molar pregnancy (MP) have been delineated, encompassing extreme maternal age, antecedent molar pregnancies, ethnicity, geographic location, nutritional factors, and blood groups. Research conducted on animal models indicates that dietary components, particularly deficiencies in vitamin A and folate, may affect genetic susceptibilities and contribute to the etiology of complete molar pregnancies.[16] In the preceding two decades, the clinical manifestation of hydatidiform mole (HM) has evolved due to advancements in diagnostic capabilities, resulting in fewer instances of vaginal bleeding, attributable to the routine implementation of ultrasound examinations.[17] However, in this study, vaginal bleeding remained the leading clinical feature, which could be due to patients mislabeling spotting or brownish discharge as bleeding.

In this study, 139 patients with molar pregnancy were analyzed, with 112 (80.58%) diagnosed with complete hydatidiform mole and 27 (19.42%) with partial moles. The average age of the patients was found to be 29 years, which is congruent with a study conducted in the same geographical area where the highest prevalence was observed within the 21-30 year age bracket, with an average age of 27 years.[18] A separate study yielded analogous findings as documented in Karachi258. The average age of the participants was recorded at 27±9.8 years, and similar results have been noted in a study conducted in Africa.[19]

Complications were observed in 62 patients, with hyperemesis gravidarum affecting 18% of patients. This figure is marginally elevated compared to the range of 8-26% documented in anotherresearch.[18,21-23.] Vaginal bleeding, which has historically been recognized as the predominant presenting symptom, was observed in 92% of the older demographic, in contrast to 67% in the more contemporary cohort, corroborating observations from various studies that indicate a decline in vaginal bleeding as a presenting symptom over time. [24,25]

The occurrence of ovarian enlargement, typically seen as a result of theca-lutein cysts, was found in only 13.6% (only 3 patients) in this study. This low number could be attributed to a policy of early ultrasound referrals for patients with symptoms like bleeding or hyperemesis to rule out molar pregnancy or twins. Monitoring of β-hCG levels is of paramount importance, and it is recommended that patients refrain from conception for a minimum of 6 months following the normalization of β-hCG levels in instances of complete molar pregnancy (CM), and for 12 months in cases of gestational trophoblastic disease (GTD). The utilization of combined oral contraceptive pills (OCP) is considered the preferred approach for contraception during this specified period.[16] While some studies suggest that using OCP before β-hCG remission may increase the risk of persistent GTD[26], other studies have found no such association [15,27,28]. All patients in this study used OCP, which allowed for effective post-evacuation monitoring of β-hCG levels.

CONCLUSION

Molar pregnancy represents a rare pathological condition in our geographical region, and the findings of this research indicate that females above the age of 35 and those who are nulliparous exhibit an increased susceptibility to the development of molar pregnancy, with vaginal hemorrhage being the predominant initial symptom. Individuals presenting with elevated levels of β-hCG (exceeding 100,000 mIU/ml) and those exhibiting uteri that are large-for-date at the time of diagnosis are at an augmented risk of evolving gestational trophoblastic disease (GTD) and necessitate meticulous monitoring. Close monitoring allows for the early detection of complications such as excessive uterine enlargement, vaginal bleeding, anemia, preeclampsia, uterine tumors, theca lutein cysts, respiratory distress, hyperemesis, hyperthyroidism, weight loss, benign molar disease, invasive moles, and choriocarcinoma.

The advent of early antenatal care appointments and standardized first-trimester ultrasonography has facilitated the earlier identification of molar pregnancies, thereby mitigating the risk of possible complications. A histopathological examination of all instances of miscarriage is imperative for the accurate identification and diagnosis of hydatidiform mole. In this investigation, the majority of the cases exhibited a benign trajectory. Nevertheless, a notable limitation of this study pertains to its retrospective nature and the constrained sample size. By targeting these complications and ensuring close surveillance, it is possible to improve outcomes and reduce the mortality and morbidity associated with molar disease.

REFERENCES

1. Yamada Y, Ohira S, Yamazaki T, Shiozawa T. Ectopic molar pregnancy: Diagnostic efficacy of magnetic resonance imaging and review of the literature. Case reports. Obstet Gynecol. 2016 Aug 25;2016.
2. Singh Y, Singh LS, Singh LR, Liyak P, Vaz A. A study of molar pregnancy at a tertiary center of India. Iosr. J Med Sci. 2016;15(9):49-52.
3. Eysbouts YK, Bulten J, Ottevanger PB, Thomas CM, Ten Kate-Booij MJ, Van Herwaarden AE, Siebers AG, Sweep FC, Massuger LF. Trends in incidence for gestational trophoblastic disease over the last 20 years in a population-based study.Gynecologiconcol. 2016 Jan 1;140(1):70-5.
4. Moussa B, Azize DA, Goumbri LO. Molar Ectopic Pregnancy: A Case Study from the Maternity Unit of the Bobo-Dioulasso Teaching Hospital. Open J Obstet Gynecol. 2016 Dec 6;6(13):846-50.
5. Elias KM, Berkowitz RS, Horowitz NS. State-of-the-Art workup and initial management of newly diagnosed molar pregnancy and postmolar gestational trophoblastic neoplasia. J National Comprehensive Cancer Network. 2019 Nov 1;17(11):1396-401.
6. Al-Talib AA. Clinical presentation and treatment outcome of molar pregnancy: Ten years' experience at a Tertiary Care Hospital in Dammam, Saudi Arabia. J fam community Med. 2016 Sep;23(3):161.
7. Sinha K, Das R, Adhikari H. Thyroid Function in Molar Pregnancies. JNGMC 2021 July; 19(1)22-5
8. Savage JL, Maturen KE, Mowers EL, Pasque KB, Wasnik AP, Dalton VK, Bell JD. Sonographic diagnosis of partial versus complete molar pregnancy: A reappraisal. J Clin Ultrasound. 2017 Feb;45(2):72-8.
9. Singh Y, Singh LS, Singh LR, Liyak P, Vaz A. A study of molar pregnancy at tertiary centre of India. Iosr. J Med Sci. 2016;15(9):49-52.
10. Rahamni M, Parviz S. A case report of partial molar pregnancy associated with a normal appearing dizygotic fetus. Asian Pacific Journal of Reproduction. 2016 Apr 1;5(2):171-3.
11. Aiob A, Naskovica K, Amdur Zilberfarb I, Sharon A, Bornstein J, Lowenstein L. Changes in diagnostic sensitivity, incidence and

presentation of complete and partial hydatidiform mole over the years. Eur J ObstetGynecolReprod Biol. 2022; 274:136-41
12. Felemban AA, Bakri YN, Alkharif HA, Altuwaijri SM, Shalhoub J, Berkowitz RS. Complete molar pregnancy. Clinical trends at King Fahad Hospital, Riyadh, Kingdom of Saudi Arabia. J Reprod Med. 1998; 43:11-3.
13. Karimi-Zarchi M, Mortazavizadeh MR, Soltani-Gerdefaramrzi M, Rouhi M, Yazdian-Anari P, Ahmadiyeh MH. Investigation of risk factors, stage and outcome in patients with gestational trophoblastic disease since 2001 to 2011 in Iran-Yazd. Int J Biomed Sci. 2015; 11:166-72.
14. Martin BH, Kim JH. Changes in gestational trophoblastic tumors over four decades. A Korean experience. J Reprod Med. 1998; 43:60-8.
15. Agrawal N, Sagtani RA, Budhathoki SS, Pokharel HP: Clinico-epidemiological profile of molar pregnancies in a tertiary care centre of Eastern Nepal: a retrospective review of medical records. Gynecol Oncol Res Pract. 2015; 2:9.
16. Coullin P, Diatta AL, Boufettal H, Feingold J, Leguern E, Candelier JJ: The involvement of the transgenerational effect in the high incidence of the hydatidiform mole in Africa. Placenta. 2015; 36:48-51.
17. Sun SY, Melamed A, Goldstein DP, Bernstein MR, Horowitz NS, Moron AF, et al. Changing presentation of complete hydatidiform mole at the New England Trophoblastic Disease Center over the past three decades: Does early diagnosis alter risk for gestational trophoblastic neoplasia? Gynecol Oncol 2015; 138:46-9.
18. Osathanondh R, Berkowitz RS,deCholnoky C, Smith BS Goldstein DP,TysonJE.Hormonal measurement in patients with theca leutic cysts and gestational trophoblastic diseases.JRepord Med.1986;31(3):179-82.
19. Sadiq S, Panjwani S. Gestational trophoblastic disease experience at the basic medical sciences institute, JPMC, Karachi. Pak J Med Sci. 2006; 22:483–5.
20. Moodley M, Tunkyl K, Moodley J. Gestational Trophoblastic syndrome: an audit of 112 patients. A South African Experience. Int J Gynecol Cancer. 2003;13(2):234–9
21. Ho PC,Wong LC and Ma HK. Plasma Prolactin, progesterone, Estradiol and human chorionic gonadotrophin complete and partial moles before and after evacuation. AmJ.Obstet.Gynecol, 1986;67(1):99-106.
22. Gestational trophoblastic tumors. Seminars in surgical Oncology. 2005; 6:347-53.
23. Berowitz RS, Golstein DP and Bernstein MR. Natural history of Partial molar pregnancy. Obstetrics and Gynecology. Mole. Journal of Reproductive medicine.2004; 66: 67-81.
24. Soto-Wright V, Bernstein M, Goldstein DP, Berkowitz RS: The changing clinical presentation of complete molar pregnancy. Obstet Gynecol. 1995; 86:775-9.
25. Mangili G, Garavaglia E, Cavoretto P, Gentile C, Scarfone G, Rabaiotti E: Clinical presentation of hydatidiform mole in northern Italy: has it changed in the last 20 years? Am J Obstet Gynecol. 2008; 198:302. e1-4.
26. Gaffield ME, Kapp N, Curtis KM. Combined oral contraceptive and intrauterine device use among women with gestational trophoblastic disease. Contraception 2009; 80:363-71.
27. Bakhtiyari M, Mirzamoradi M, Kimyaiee P, Aghaie A, Mansournia MA, Ashrafi-Vand S, et al. Postmolar gestational trophoblastic neoplasia:Beyond the traditional risk factors. Fertil Steril2015; 104:649-54.
28. Savage PM, Sita-Lumsden A, Dickson S, Iyer R, Everard J, Coleman R, et al. The relationship of maternal age to molar pregnancy incidence, risks for chemotherapy and subsequent pregnancy outcome. J ObstetGynaecol. 2013; 33:406-11

This article may be cited as: Bibi N, Hashmi IB, Ahmad S, Mehsood N, Saba N, Bibi S; Frequency of Common Clinical Presentation in patients with Molar Pregnancy In Gomal Medical College, Dera Ismail Khan, Pakistan. Pak J Med Health Sci, 2023;18(11): 566-569.