


Molar pregnancy frequency of abortions in our clinic and pre-diagnosis success

Kliniğimizde gerçekleşen abortusların molar gebelik sıklığı ve ön tanı başarısı

Özge Şehirli¹ 

Mehmet Ferdi Kıncı² 

Mehmet Onur Arslaner² 

Firangiz Mirzazada² 

Melek Ünçel³ 

¹ Liv Hospital, Obstetrics and Gynecology Department, Ankara, Türkiye

² İzmir Bayraklı City Hospital, Obstetrics and Gynecology Department, İzmir, Türkiye

³ Konya Akşehir State Hospital, Obstetrics and Gynecology Department, Konya Türkiye

⁴ Special Denizli Cerrahi Hospital, Obstetrics and Gynecology Department, Denizli, Türkiye

⁵ Muğla Sıtkı Koçman University Education and Research Hospital, Clinical Pathology Department, Muğla, Türkiye

ABSTRACT

Aim: Abortion is the termination of pregnancy before the 20th gestational week or when the fetus is below 500 g. Its prevalence is between 50-70% in all pregnancies. Routine histological examination (HE) of abortion materials is controversial in terms of molar pregnancy (MP) diagnosis. This study aims to determine the necessity of HE by evaluating the MP frequency and pre-diagnosis success of abortions in our clinic.

Materials and Methods: In this retrospective study, 1007 women whose pregnancy resulted in abortion between 01.01.2019-01.01.2022 and whose demographic data, USG findings, pre-diagnoses and HE results were present, were included. The preliminary diagnoses of patients with complete hydatidiform moles (CMH) and partialhydatidiform moles (PMH) were compared with the HE results.

Results: Among the materials sent to pathology for HE, the most common diagnosis was missed abortion with 590 (58.78%). MP was detected in 32 (3.17%) women. Of these, 9 (0.89%) were found to be CMH, while 23 (2.28%) were PMH. While 6 (66.6%) of 9 patients diagnosed with CMH were pre-diagnosed with CMH, 10 (43.37%) out of 23 patients diagnosed with PMH were pre-diagnosed as PMH.

Conclusion: Since the prevalence of MP is 3.17% and there is a high inconsistency between the pre-diagnosis and the result of HE, we recommend that all abortion materials be performed with HE.

Keywords: Abortion, complete mole hydatidiform, histological examination, partial mole hydatidiform.

ÖZ

Amaç: Abortus, 20. gebelik haftasında önce veya 500 gramın altında iken gebeliğin sonlanmasıdır. Sıklığı tüm gebeliklerde %50-%70 arasındadır. Abortus materyallerinin rutin histopatolojik incelemesi konusu molar gebelik (MG) tanısı açısından tartışma konusudur. Bu çalışmadaki amacımız; kliniğimizde gerçekleşen abortusların MG sıklığının ve ön tanı başarısını değerlendirerek, histopatolojik inceleme gerekliliğini saptamaktır.

Gereç ve Yöntem: Bu retrospektif çalışmaya, 01.01.2019-01.01.2022 tarihleri arasında gebeliği abortus ile sonuçlanan, demografik verileri, USG bulguları, ön tanılarına ve histopatolojik inceleme sonuçları bulunun 1007 kadın dahil edildi. Parsiyel mol hidatiform (PMH) ve komplet mol hidatiform (KMH) tanısı olan hastaların ön tanıları ile histopatolojik inceleme sonuçları karşılaştırıldı.

Corresponding author: Mehmet Ferdi Kıncı
Muğla Sıtkı Koçman University Education and Research
Hospital, Obstetrics and Gynecology Department, Muğla,
Türkiye

E-mail: drferdikinci@gmail.com

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Bulgular: Histopatolojik inceleme için patolojiye gönderilen materyaller arasında en sık rastlanan tanı 590 (%58,78) ile missed abortus idi. 32 (%3,17) kadında MG saptanmıştır. Bunlardan 9 (%0,89) tanesi KMH, 23 (%2,28) tanesi ise PMH olarak saptanmıştır. KMH tanısı konulan 9 hastanın 6 (%66,6) tanesinin ön tanısı KMH, PMH tanısı alan 23 hastanın 10 (%43,37) tanesinin ön tanısı PMH idi.

Sonuç: MG sıklığının %3,17 olması, ön tanı ile histopatolojik inceleme sonucu karşılaştırmasında uyumsuzluğun yüksek olması nedeni ile tüm abortus materyallerinin histopatolojik inceleme yapılmasını önermekteyiz.

Anahtar Sözcükler: Abortus, parsiyel mol hidatiform, komplet mol hidatiform, histopatolojik inceleme.

INTRODUCTION

Abortion is the termination of pregnancy before the 20th gestational week or when the fetus is below 500 g (1). This is one of the most common medical problems experienced by women of reproductive age. Its prevalence is between 50-70% in all pregnancies (2). In clinically diagnosed pregnancies, its frequency reaches up to 75% over the age of 45 but is generally between 15-20% (3). Abortions other than interventional abortions performed for medical reasons is called inevitable, imperfect, complete, spontaneous, and missed abortions (4).

The routine histological examination (HE) of abortion materials has been the subject of discussion in the literature. Some sources recommend that all abortion materials be made with HE to exclude medico-legal problems. Others recommend HE for diagnostic purposes only in cases where the diagnosis is uncertain, taking cost-effectiveness into account (5).

Molar pregnancy (MP) is a gestational trophoblastic disease characterized by abnormal growth of placental tissues due to a nonviable pregnancy. Although it varies according to factors such as gestational age and geographical region, its frequency is around 1/1000 (6). Considering factors such as etiology, course, diagnosis, and prognosis, it is divided into 2 complete hydatidiform moles (CMH) and partial hydatidiform moles (PMH). Fetal presence and fetal cardiac activity can be observed, particularly in PMH (7). Therefore, it is especially confused with incomplete and missed abortions. HE is necessary for a definitive diagnosis.

This study aims to compare the pre-diagnoses of abortions in our tertiary center clinic with PMH and CMH results in HE results of abortion materials. In this way, we will discuss the necessity of HE of all abortion materials.

MATERIALS and METHODS

In this retrospective study, 1007 women whose pregnancy resulted in abortion between

01.01.2019-01.01.2022 and whose demographic data, USG findings, pre-diagnoses, and HE results were present were included. Women whose pregnancy was confirmed by ultrasonographic (USG) or b-hCG were considered pregnant. The diagnoses of missed abortion, anembryonic pregnancy and abortion incipient, incomplete abortion, and IU ex-fetus diagnosed by USG were arranged according to the ACOG guideline (8). Pregnancies below the 20th gestational week or less than 500 g were considered abortion criteria (1). Ethical approval was granted from the *** University Education and Training Hospital ethical committee (Number: 06.09.2022, Date: 70). Since the study was planned retrospectively, no consent form was taken. All reported research involving "human beings" were conducted in accordance with the principles outlined in the Helsinki Declaration 2008. Women whose pregnancy could not be clinically proven, whose demographic or HE results could not be obtained, who had electively-induced abortion (non-medically indicated, on patient demand), and whose abortion material could not be reached as a result of complete abortion outside the hospital were excluded from the study. Materials received during speculum examination of women with thin endometrial thickness as a result of complete abortion were sent for HE.

The epicrisis, pre-diagnoses, and USG findings of the patients whose HE results were found to be MP were analyzed through the hospital automation system (KarMed®). The pre-diagnoses and the HE results were compared. The accuracy rate in the pre-diagnosis was calculated.

Statistical Analysis

The normal distribution of the data was determined using normality tests. Data that didn't

fit the normal distribution were reported as median (min-max).

RESULTS

The study included 1007 women who met the criteria for inclusion. The mean age of these women was 29.56 ± 7.28 , and the mean gestational week was 9.22 ± 3.49 weeks. The most commonly encountered diagnosis among the materials sent to pathology for HE was missed abortion, with 590 (58.78%). Placental villus was not found in 59 (5.85%) women from the materials used for HE, and ectopic pregnancy (EP) was considered due to the Arias-Stella reaction. MP was detected in 32 (3.17%) women. Of these, 9 (0.89%) were found to be CMH, while 23 (2.28%) were PMH. Of 9 patients diagnosed with CMH, 6 (66.6%) were pre-diagnosed as CMH, 2 (22.2%) were EP, and 1 (11.1%) was abortus imminence. The median age of the patients diagnosed with CMH, the median gravida value, and the median parity value were respectively [18-41], [1-4], and [0-3]. Demographic data, pre-diagnoses, and HE results of patients diagnosed with CMH are given in Table-1.

Of the 23 patients diagnosed with PMH, 10 (43.37%) were pre-diagnosed with PMH, 5 (21.73%) with IU ex fetus, and 2 (8.69%) with missed abortion, anembryonic pregnancy, and abortion incipient. 1 (4.34%) of them were pre-diagnosed with incomplete abortion and CMH. The median age, gravida median value, and parity median value of patients diagnosed with PMH were 28 [17-47], 3 [1-7], and 1 [0-3], respectively. Demographic data, pre-diagnosis, and HE results of patients diagnosed with PMH are given in Table-2.

Table-1. Demographic data and preliminary diagnoses of women diagnosed with CMH.

Age	Gravida	Parity	Pre-Diagnosis
18	2	1	CMH
19	2	1	CMH
18	2	1	CMH
30	2	0	CMH
28	4	3	CMH
30	3	2	CMH
32	2	1	Ectopic pregnancy
41	3	1	Ectopic pregnancy
31	1	0	Abortion imminence

Table-2. Demographic data and preliminary diagnoses of women diagnosed with PMH.

Age	Gravida	Parity	Pre-Diagnosis
20	3	1	IU ex-fetus
22	3	2	PMH
24	2	0	PMH
26	3	1	CMH
26	4	3	PMH
27	1	0	Incomplete abortion
21	2	0	IU ex-fetus
35	2	1	PMH
36	2	1	PMH
35	2	1	PMH
40	3	2	PMH
43	2	1	Incipient abortion
47	4	3	PMH
24	3	2	PMH
20	2	1	IU ex-fetus
17	1	0	IU ex-fetus
28	3	2	PMH
23	4	2	Missed abortion
31	1	0	Incipient abortion
38	3	1	Anembryonic pregnancy
44	4	2	Missed abortion
38	5	2	Anembryonic pregnancy
39	7	3	IU ex-fetus

DISCUSSION

This study aims to evaluate the necessity of routine HE examination of abortion materials. In our study, 1007 HE results due to abortion was evaluated, and 9 (0.89%) were found to be CMH and 23 (2.28%) to be PMH. The pre-diagnosis of 6 (66.6%) out of 9 patients diagnosed with CMH was consistent with the result of HE. The preliminary diagnosis of 10 (43.37%) of 23 patients diagnosed with PMH was consistent with the result of HE.

In the study of Alsibiani et al., in which they examined first-trimester pregnancy loss and 558 HE results, MP was found in 2 (0.4%) women, CMH in 1 woman (50%) and PMH in 1 woman (50%) (9). The pre-diagnosis of the patient diagnosed with PMH was different. As a result of this study, it was considered that 558 HE

examinations were not cost-effective to skip 1 PMH case. In the study of Heath et al., MP was found in 2 (0.13%) of 1576 women. In this study, the authors suggested HE should be performed only in cases where the diagnosis is uncertain, taking into account pre-diagnoses such as EP and MP (5). In the study conducted by Taşçı et al. in our country with 1606 patients, PMH was found in 33 (2.1%) patients and CMH was found in 7 (0.43%) patients. The exaggerated placental site and placental site trophoblastic nodule was detected in two cases (0.12%) (10). Taşçı et al. suggested routine HE in first trimester abortions as a result of their study. The PMH and CMH rates in our hospital were found to be higher than in other studies in the literature. We attribute this situation to the referral of all cases considered to be complicated to our clinic, as we are the only tertiary center in our province.

In the study of Albayrak et al., the preliminary diagnoses of 1004 women and the results of HE were compared (11). In this study, 1 (0.09%) patient was diagnosed with CMH and 9 (0.89%) patients with PMD. While the pre-diagnosis of 5 (55%) patients diagnosed with PMH was an anembryonic pregnancy, the pre-diagnosis of the only patient diagnosed with CMH was an anembryonic pregnancy. As a result of these studies, the authors concluded that performing HE on the obtained materials is reasonable and safe. In our study, the pre-diagnosis success of CMH and the pre-diagnosis success of PMH were found to be 66.6% and 43.37%, respectively. Similar to the results of Albayrak et al.'s study, we think that HE should be performed on all abortion materials (11).

In the study by Sarmadi et al., HE results of 90 abortion materials diagnosed with PMH, CMH, and hydropic abortion (HA) were compared by two different pathologists (12). Inconsistency was present in 36.7% of these diagnoses. This inconsistency was 24.4% between PHM and CHM, and 12.2% between PMH and HA. Among defined diagnostic histological criteria, the highest rate of agreement was observed in the identification of cistern formation and hydropic changes. In our study, HE was not performed by different pathologists.

CONCLUSION

Since our clinic is the only tertiary center in the province where our clinic is located, the frequency of MP was observed to be higher than in the studies in the literature. In addition, we recommend that HE should be performed on all abortion materials due to the high incompatibility compared to the preliminary diagnosis and HE result.

Ethics Committee Approval: Approval for the study was obtained from the Clinical Research Ethics Committee of Muğla University (decision no: 70, date: 06.09.2022).

Informed Consent: Retrospective study.

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