

Frequency of hydatidiform mole in the rural part of Eskişehir: the first community-based epidemiological study in Turkey

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Summary

This epidemiological study was performed in order to determine the frequency of hydatidiform mole (HM) in the rural part of Eskişehir, Turkey. Four mole cases and 6,274 pregnancies were determined in 2,032 women aged 15-49 which was 85% of the target population. Mean age, mean marriage age and mean marriage duration of the interviewed women were 34.7, 19.1 and 15.6 years, respectively. The frequency of HM per 1,000 live births and per 1,000 pregnancies was 0.83 and 0.64, respectively. The frequency of HM was lower than the frequencies reported by most of the hospital-based studies. We concluded that there appears to be a need to conduct properly designed community-based studies with well-established case registry systems to find the real incidence of HM in Turkey.

Key words: Hydatiform mole; Eskişehir.

Introduction

Gestational trophoblastic disease (GTD) consists of a spectrum of neoplasias, ranging from the benign hydatidiform mole to malignant choriocarcinoma [1]. There appears to be a considerable variation in reports concerning hydatidiform mole (HM) incidence in Turkey. It varies from 0.3 to 9.7 moles per 1,000 pregnancies depending on the demographic factors of the population studied. However, the main reason for the variation may be due to the origin of the reports, which were all hospital-based [2].

The aim of the study was to perform an epidemiological field study of HM in the rural region of Eskişehir, Turkey.

Materials and Methods

The fecundity properties and HM history of women aged 15-49 have been investigated using an inquiry prepared with the aim of including questions regarding the demographic information of the women interviewed. The study was performed in four districts of the research and training area of Osmangazi University. There were 2,390 females aged between 15-49 years and 85% (n = 2,032) of the population was reached by home visits. Female students in the graduate class of Osmangazi University School of Medicine completed the inquiry by a face-to-face technique.

The data obtained were evaluated by using computer and statistical analysis of the differences performed according to the Poisson probability distribution.

Results

The number women interviewed was 2,032. Mean age, mean marriage age and mean marriage duration of the women were 34.7, 19.1 and 15.6 years, respectively.

Some socio-demographic information of the interviewed women is given in Table 1.

HM was determined in four cases and the frequency of HM per 1,000 pregnancies and per 1,000 live births was 0.64 and 0.83, respectively.

The distribution of the fecundity properties of the women according to their age groups and the time period is given in Table 2.

Table 1. — *Socio-demographic information of the interviewed women.*

Mean age of the women (years)	34.67
Mean marrying age (years)	19.09
Mean marriage period (years)	15.58
Women-years (number of women x marriage duration)	31,658
General fecundity (mean of the 15 years)	15.1%
Number of HMs determined	4
Frequency of the HM	
Per 1,000 live births	0.83
Per 1,000 pregnancies	0.64
Per 1,000 women-years	0.13

Table 2. — *The fecundity properties of the women according to their ages and the time period.*

	No. of women	No. of live births	No. of still births	No. of miscarriages	No. of pregnancies	No. of HM	*
<i>Age of women</i>							
15-29	631	917	9	188	1114	2	P(2)=0.12
30-39	761	1831	38	569	2438	0	P(0)=0.21
40-49	640	2047	55	620	2722	2	P(2)=0.27
<i>Time period</i>							
1970-1979		1434	39	288	1761	0	P(0)=0.33
1980-1989		1715	39	561	2315	2	P(2)=0.25
1990-1999		1646	24	528	2198	2	P(2)=0.24
Total	2032	4795	102	1377	6274	4	

*According to 4 moles per 6,274 pregnancies (0.064%), probabilities of the number of moles is according to the Poisson probability distribution.

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Discussion

The fecundity properties and HM history of 2,032 fertile- aged women – reaching 85% of the target population of the four rural regions of the Research and Training Area of Osmangazi University – have been presented as the preliminary results of the study.

Of a total number of 1,114 pregnancies in the 15-29 age group two cases of HM were established to give an average incidence of 1.79 per 1,000 pregnancies and 2.18 per 1,000 live births. These figures were 0.73 and 0.98 per 1,000 pregnancies and live births, respectively, for the 40-49 age group. These results are lower than the results given by hospitals. According to a screening of the Turkish literature, the incidence of hydatidiform mole ranges from 0.3 to 9.7 in 1,000 pregnancies and from 1.1 to 16.0 in 1,000 births [2-7].

As shown in Table 2, during the 1980-1989 period, the incidence rates per 1,000 pregnancies and live births were 0.86 and 1.17, respectively, and 0.91 and 1.22, respectively for the 1990-1999 period.

A frequency of four HMs determined in 6,247 pregnancies (0.064%) was two to four times lower than the frequencies reported by maternity hospitals and universities [2-7]. Differences of rates up to two-fold have also been observed among the hospitals. University and maternity hospitals constituting tertiary reference centers, where more complicated pregnancies are being consulted, could explain the validity of this remark. Due to the absence of a national case registry system, the reports from the hospitals could not be extrapolated to the whole population. It is also possible to interpret the difference of the rate obtained in our study by being an area research.

No difference was found in the frequency of HM cases with regard to age and time period (Table 2).

The handicap of retrospective field studies is the patients that comes to that area or has left the area before

the study period. In the study one case had entered the area before the research and moved away from the area after the research. Thus, the best way to obtain data seems to be through a national case registry system.

Conclusion

The incidence rate of HM determined in four rural districts of Eskişehir, Turkey was 0.064%.

We concluded that there appears to be a need for properly conducted and designed community-based studies with well-established case registry systems to determine the true incidence of HM in Turkey.

References

- [1] Yalçın O.T., Özalp S.S., Tanır H.M.: "Assessment of gestational trophoblastic disease by Doppler ultrasonography". *Eur. J. Obstet. Gynecol. Rep. Bio.*, 2002, 103, 83.
- [2] Özalp S.S., Yalçın O.T., Tanır H.M.: "Hydatidiform mole in Turkey from 1932 to 2000". *Int. J. Gynecol. Obstet.*, 2001, 73, 257.
- [3] Eren S., Demirci F., Uludoğan M. *et al.*: "Gestasyonel Trofoblastik Hastalıklar. 154 olgu analizi". *Kartal Devlet Hastanesi Tıp Dergisi*, 1992, 3 (1-4), 319.
- [4] Mungan T., Kuşçu E., Dabakoğlu T. *et al.*: "Hydatidiform mole. Clinical analyses of 310 patients". *Int. J. Gynecol. Obstet.*, 1996, 52, 233.
- [5] Pekin S., Erdoğan M., Tuncer M.: "Trofoblastik Hastalıklar ve Sitostatiklerle Modern Tedavileri". *Hacettepe Tıp Cerrahi Bülteni*, 1969, 2 (2), 135.
- [6] İnanç F., Eşen O., Narter İ.: "Mola Hydatidosa (176 vaka münasebeti ile)". *İstanbul Üniv. Tıp Fak. Mec.*, 1970, 33 (4), 653.
- [7] Atasü T., Eğeci Y., Eşen O. *et al.*: "Ülkemizde Mol Hidatidiform Taraması". *Çağdaş Hekimlik*, 1975, 3, 17.

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