

Epidemiology of hydatidiform mole in Finland, 1975 to 2001

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Summary

Purpose: Broad variations in the incidence of gestational trophoblastic diseases have been reported in different parts of the world. Recent time trends in the incidence of hydatidiform mole in Western countries have not been elucidated. We studied the epidemiology of hydatidiform mole in Finland over a period of 27 years.

Methods: Women reported to have hydatidiform mole from 1975-2001 were identified from the National Research and Development Center for Welfare and Health. Women with choriocarcinoma were identified from the Finnish Cancer Registry.

Results: We identified 1,659 cases of hydatidiform mole between 1975 and 2001. This gives an incidence of 73/10⁶ women or 984/10⁶ deliveries. The overall incidence remained fairly constant over the study period. The incidence was higher in women below 20 years and above 39 years than in women in the other age groups. Forty-nine percent of choriocarcinomas identified during the study period were associated with a preceding hydatidiform mole. The risk of choriocarcinoma after a hydatidiform mole was 2.2%.

Conclusion: The incidence of hydatidiform mole in Finland follows the same patterns as in other Western countries. The incidence has not changed considerably in recent decades.

Key words: Choriocarcinoma; Epidemiology; Gestational trophoblastic disease; Hydatidiform mole.

Introduction

Hydatidiform mole is a trophoblastic lesion characterized by hydropic swelling of chorionic villi and trophoblastic proliferation [1]. It is managed by suction curettage followed by close monitoring of serum chorionic gonadotropin [2]. The risk of choriocarcinoma after a molar pregnancy was about 3% in earlier data sets [3].

Broad variations in the incidence of hydatidiform mole have been reported in different parts of the world. The incidence has been reported to be ten times higher in Asia than in Europe and North America [1]. This variance may partly be due to differences in reporting of hospital-based and population-based data, differences in histological classification, and methodological difficulties. However, they cannot completely explain the large variations observed across countries.

Recent time trends in the incidence of hydatidiform mole in Western countries have not been elucidated. Here, we report characteristics of the incidence pattern of hydatidiform mole in Finland over a period of 27 years.

Methods

The study protocol was approved by the National Research and Development Center for Welfare and Health (Stakes). Women reported to have hydatidiform mole from 1975-2001 were identified from the hospital discharge registry of Stakes. The number of women in different age groups was obtained from statistical yearbooks of Finland [4], and the number of deliveries was obtained from Stakes. Women with choriocarcinoma were identified from the Finnish Cancer Registry.

Results

We identified 1,659 cases of hydatidiform mole between 1975 and 2001. This gives an incidence of 73/10⁶ women or 984/10⁶ deliveries (Table 1). The overall incidence remained fairly constant over the study period (Table 1).

Table 1. — Number of new cases and incidence rates of hydatidiform mole in 3-year periods from 1975-2001 in Finland.

Period	New cases	Incidence per 10 ⁶ women	Incidence per 10 ⁶ deliveries
1975-77	222	91	1,126
1978-80	174	71	920
1981-83	202	81	1,035
1984-86	183	72	978
1987-89	185	73	991
1990-92	168	65	856
1993-95	162	62	844
1996-98	191	72	1,087
1999-2001	172	66	1,023
Total	1,659	73	984

The incidence of hydatidiform mole was higher in young and old fertile women than in the other age groups (Figure 1). In women below 20 years, the incidence was 1,730/10⁶ deliveries. The sharpest rise in the incidence was observed in women above 44 years (58,400/10⁶ deliveries).

Seventy-five cases of choriocarcinoma were identified between 1975 and 2001. Of the women with choriocarcinoma, 37 also had a diagnosis of hydatidiform mole. This

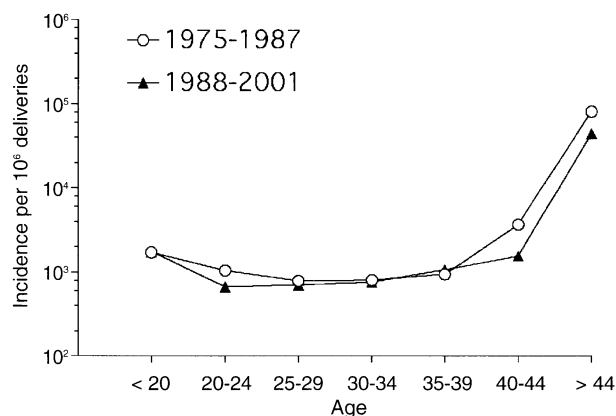


Figure 1. — Incidence of hydatidiform mole per 10⁶ deliveries in different age groups in Finland in the time periods 1975-1987 and 1988-2001.

indicates that 49% of choriocarcinomas were associated with a preceding mole. Based on the 37 cases of choriocarcinoma in 1,659 cases of hydatidiform mole, the risk of choriocarcinoma after a hydatidiform mole was 2.2%.

Discussion

The incidence of hydatidiform mole in Finland reported here is comparable with that reported earlier for other Western countries such as England and Wales (1,540/10⁶ live births) [5] and the county of Stockholm in Sweden (1,460/10⁶ deliveries) [6]. A much higher incidence has been found for Asian countries, especially Indonesia (17,500/10⁶ deliveries) [7].

A well established risk factor associated with trophoblastic diseases is maternal age, so that the risk is higher at both ends of the reproductive age [1]. This phenomenon was also detected in our study on Finnish women, in whom the risk was especially high in old fertile women.

Choriocarcinoma was associated with a preceding hydatidiform mole in 49% of the cases. This is in agreement with earlier studies in which the proportion of choriocarcinomas preceded by moles varied between 39% and 78% [8]. Similarly, the 2.2% risk of choriocarcinoma associated with hydatidiform mole found in this study is in the same region as that described earlier [3].

We have earlier reported a decline in the incidence of choriocarcinoma in women between 25 and 39 years in Finland after 1985 [9]. A similar decline in the incidence of hydatidiform mole was not seen in the present study.

It could be hypothesized that this difference in the incidence pattern of the two gestational trophoblastic diseases is partly due to the introduction of EMA/CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine/ovocine) treatment for trophoblastic diseases in 1986 [10]. This combination chemotherapy may diminish the risk of choriocarcinoma when used for high-risk cases of hydatidiform mole.

Conclusion

The incidence of hydatidiform mole in Finland follows the same patterns as in other Western countries. The incidence has not changed considerably in recent decades.

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