Epidemiological Study of Molar Pregnancy

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ABSTRACT

The hydatidiform mole is one of the most serious pathologies of the placenta, which can occur in the first trimester of pregnancy. The determination of its prevalence as well as its risk factors is necessary. The objective of this work is to explore epidemiologically the prevalence and etiologies of this pathology in Sidi Bel Abbes town. This study reveals that since January 2004, the number of annual cases of maternal pregnancies recorded by maternity continues to increase with a frequency of 9.4 ‰, among women whose age is 20-29 years.

Keywords: Hydatidiform mole, risk factor, epidemiology

1. INTRODUCTION

Gestational trophoblastic disease is one of the oldest recognized neoplasias. Hippocrates described the first "Hydropisis" of the uterus in 400 BC. At present, MTG retains a special status by virtue of its nature as the most sensitive and easily treatable biological tumor of all human cancers.

The trophoblastic disease has a spectrum of tumors with a wide range of biological behaviors and a risk of metastasis. It affects the benign and malignant entities of the spectrum and includes the hydatiform mole, the invasive mole, the choriocarcinoma and the placental trophoblastic tumor.

The hydatiform mole is the most frequent and best known of these gestational trophoblastic diseases. It can be complete and occurs in about 1 case per 1000 pregnancies, or partial and affects 3 cases in 1000 pregnancies. It results from a cystic transformation of chorionic villi with trophoblast proliferation leading to hypersecretion of chorionic hormone gonadotropin (hCG).

The incidence of hydatidiform mole varies in different parts of the world, but it is declining. In North America, the incidence is about three times higher than in Asia. In France, the number of hydatiform moles can be estimated at about 800 per year.

The aim of our work is to evaluate the frequency of male to female pregnancies in patients aged 20 to 51 years thanks to a retrospective epidemiological study, as well as the identification of the risk factors involved.
2. METHODS

The duration of the different analyzes acquired by our study is as follows:

- Retrospective study: It extends over a period of 4 years (from January 1, 2004 to December 31, 2008), (from January 1, 2010 to December 31, 2016) it took place at the level of the maternity archives service;
- The study population consists of women admitted for Gynecological or Obstetric care during the study period.
- We followed a methodology that splits into two parts: a study of the archived files, a questionnaire for a complete exploitation of the data.
- The data was entered on Word 2003 and processed on Excel.

3. RESULTS

Incidence in relation to the number of normal pregnancies

In this study, we counted 41,364 pregnancies, with 78 cases of complete and partial pregnancies from 2004 to 2008, a frequency of 9.4 ‰; and there were 85,564 normal pregnancies with 111 cases of full and partial pregnancies since 2010 to 2016, a frequency of 1.3 ‰. Our results are two to two and a half times higher than those of certain African studies, particularly those carried out in Senegal (2.5 ‰), Morocco (2.3 ‰ and 1.3 ‰ and 3.5 ‰).

They also exceed those of studies carried out in Europe with 4.4 ‰ in Holland and 1 ‰ in France.

This rise in frequency could be explained by different or additional risk factors.

The incidence compared to the age of the sick person

Molar pregnancy has been found to be more frequent in the age group 20-29, it is slightly elevated in women with age from 30 to 39, while it is minimal in the age groups: 15-19 and 50-55 which ends the period of genital activity.

The incidence compared to the gyneco-obstetrical antecedents

Fig. 1: Distribution of molar pregnancy cases by number of pregnancies per year

A: From January 1, 2004 to December 31, 2008

B: From January 1, 2010 to December 31, 2016

Fig. 2: Distribution of GM cases in relation to the age of the patient, From January 1, 2004 to December 31, 2008

Fig. 3: Distribution of molar pregnancy cases according to the existence of a history of miscarriage (January 1, 2004 to December 31, 2008)
The history of miscarriage was not found in our patients in 79.49% of cases, with only one case of twin pregnancy.

**The incidence compared to the number of gestates**

We found that molar pregnancy is common among paucigests in 39.74% of cases between 2004 and 2008; and in 56% of cases between 2010 and 2016. Our results are similar to those noted by KHELIFA and Hamlaoui and in Morocco by Fahd.

**The incidence compared to the number of parity**

The results reveal that GM is common among pauciparians with about 35% to 49%.

**The incidence in relation to β-hCG rate**

The results show that more than half of the study population (66.67%) has high β-hCG levels, and only 10% have levels below 1500 IU/L. While 23.08% did not do the test.
According to the literature, the hydatiform mole is suspected when the β-hCG level is greater than 100 IU/L (Kurjak and Guillermon, 2007). These data are comparable to those of the reference center for trophoblastic diseases in France.

**The incidence by reporting to the curing mode**

Curettage was performed in 87.18% of cases with 3.85% Hysterectomy.

**REFERENCES**

1. Abbassi H., El-jersifi H., Matra N et Bouhya S ; Môle hydatiforme à propos de 73 cas, Casablanca, Maroc ; Ed : Maghreb Médical N° 340 ; 1999 ; pp. 34-36
2. Andrieu J-M., Colonna P., Lévy R ; Cancers: Guide pratique d'évaluation de traitement et de surveillance ; Estem ; 1997 ; pp 581-586
4. Faucher P et Hassoun D ; IVG médicamenteuse ; Ed: Estem ; 2005 ; pp 42-44
5. Gerulath A H ; directive clinique de la SOGC ; N°114 ; Mai 2002 ; pp 1-6
6. Heffner L J ; Reproduction humaine ; Ed: De Boeck Université ; 2003 ; pp91-92
7. Johnson M H et Everitt B J; Reproduction; Ed : De Boeck Université ; 2001 ; pp 172-181
11. Lansac J., Berger C., Magnin G ; Obstétrique ; Ed: Elsevier Masson ; 2003 ; pp 268-269

**4. CONCLUSION**

The hydatiform mole is a frequent condition with a prevalence of 9.4‰ in Algeria, which seems high compared to the rates recorded during epidemiological surveys conducted in other countries of the Great Maghreb, Europe and the United States.

The profile common to all our patients is that of young women, about 29 years old, with no history of spontaneous, paucigous miscarriages, in amenorrhea for less than 3 months coming for hemorrhage with pelvic pain, and at the size of the uterus is larger than the theoretical size of amenorrhea.

Molar pregnancy was diagnosed from the binomial combination: β-hCG and pelvic ultrasound.

The management of this pregnancy is a uterine evacuation by simple curettage under general anesthesia.

After curettage, the triad: ultrasound monitoring, determination of the β-HCG level and histopathological diagnosis is the key to the therapeutic indications to be followed by the patient.

Molar pregnancy is a common pathology, which requires special monitoring and adequate treatment in order to detect any abnormal trophoblastic activity in time, requiring specific treatment with chemotherapy associated or not with hysterectomy.