



ORIGINAL ARTICLE

Clinical and epidemiological characterization of ectopic pregnancy in the General Teaching Hospital "Abel Santamaría Cuadrado"

Caracterización clínica y epidemiológica del embarazo ectópico en el Hospital General Docente "Abel Santamaría Cuadrado"

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ABSTRACT

Introduction: the implantation outside the endometrial cavity of the product of conception is known in medicine as ectopic pregnancy.

Objective: to characterize the clinical and epidemiological behavior of ectopic pregnancy during 2019 at the General Teaching Hospital "Abel Santamaría Cuadrado".

Methods: a descriptive, observational and cross-sectional research was carried out in the Gynecology and Obstetrics service of the aforementioned health institution. The sample consisted of 62 patients attended at the aforementioned service, with a confirmed diagnosis of ectopic pregnancy. Descriptive statistics were used.

Results: the most affected age group was 15-25 years with 46,8 %, pelvic inflammatory disease was the main gynecological history (35 %), the intrauterine device was the most relevant risk factor (33,8 %), the most frequent symptoms were: bloody leakage, pelvic pain and menstrual delay (37 %). The complementary with the greatest diagnostic value was ultrasound (40,3 %). The predominant surgical intervention was left salpingectomy (37,3 %).

Conclusions: in the municipality of Pinar del Rio the incidence of ectopic pregnancy has increased, constituting a health problem, so it is necessary to create new ways and methods for the management of risk factors of this condition.

Keywords: Pregnancy, Ectopic; Pelvic Inflammatory Disease; Implantation.

RESUMEN

Introducción: la implantación fuera de la cavidad endometrial del producto de la concepción se conoce en medicina como embarazo ectópico.

Objetivo: caracterizar el comportamiento clínico y epidemiológico el embarazo ectópico durante el año 2019 en el Hospital General Docente "Abel Santamaría Cuadrado".

Métodos: se realizó una investigación descriptiva, observacional y de corte transversal, en el servicio de Ginecología y Obstetricia de la institución de salud mencionada anteriormente. La muestra quedó constituida por 62 pacientes atendidas en el servicio antes mencionado, con diagnóstico confirmado de embarazo ectópico. Se utilizó la estadística descriptiva.

Resultados: el grupo de edades más afectado fue el 15-25 años con un 46,8 %, la enfermedad inflamatoria pélvica fue el principal antecedente ginecológico (35 %), el dispositivo intrauterino fue el factor de riesgo más relevante (33,8 %), los síntomas más frecuentes fueron: pérdidas sanguinolentas, dolor pélvico y retraso menstrual (37 %). El complementario con mayor valor diagnóstico fue el ultrasonido (40,3 %). La intervención quirúrgica que predominó fue la salpingectomía izquierda (37,3 %).

Conclusiones: en el municipio Pinar del Rio se ha incrementado la incidencia del embarazo ectópico, constituyendo un problema de salud, por lo que se hace necesario la creación de nuevas formas y métodos para el manejo de los factores de riesgo de dicha condición.

Palabras clave: Embarazo Ectópico; Enfermedad Inflamatoria Pélvica; Implantación.

INTRODUCTION

Blastocyst implantation anywhere outside the endometrial cavity is known as ectopic pregnancy (EP). It is responsible for approximately 10 % of maternal mortality. The overall conception rate after an ectopic pregnancy varies from 60-80 %.⁽¹⁾ Ectopic pregnancy is considered to be a pregnancy management condition, as the bleeding that occurs is the result of a gestational condition. It is the third leading cause of maternal death.⁽²⁾

The incidence of ectopic pregnancy ranges from 1:40 to 1:100 pregnancies, occurs in 0,5 to 2 % of all pregnancies and recurrence is 15-20 %.⁽³⁾ In the USA, the incidence of ectopic pregnancy is 1,5 – 2 %.⁽⁴⁾ It occurs almost twice as often in black women, and four times the risk of mortality is reported in black women relative to white women.⁽⁵⁾

Symptoms of ectopic pregnancy sometimes consist of the same symptoms as pregnancy, such as tender breasts or stomach discomfort. It may also present with abnormal vaginal bleeding that occurs outside the time of the menstrual period. It may be mild or severe, abdominal or pelvic pain may come on suddenly and be sharp, cannot be relieved, or comes and goes, among other symptoms.⁽⁶⁾

Risk factors include previous tubal surgery, personal pathological history of ectopic pregnancy, previous genital infections, assisted reproduction, smoking (risk increases with higher cigarette consumption), age (increases above 40 years), use of intrauterine device (IUD), multiparity, previous miscarriage and exposure to diethylstilbestrol in utero.⁽⁷⁾

In Cuba, ectopic pregnancy contributes to maternal deaths. In our country, between 1985 and 1991, 33 % of all maternal deaths were due to bleeding, and the leading cause was complicated ectopic pregnancy (EP), which accounted for 37 % of all maternal deaths.⁽⁸⁾

Due to the relevance and pertinence of the topic, the aim of this research is to characterize the clinical and epidemiological behavior of ectopic pregnancy in 2019.

METHODS

A descriptive, observational and cross-sectional study was carried out in the Gynecology and Obstetrics Department of the General Teaching Hospital "Abel Santamaría Cuadrado" in 2019.

The universe was made up of all patients who attended the on-call service for presenting gynecological pain during the aforementioned period of time (N=102). The sample consisted of 62 patients who had a confirmed diagnosis of ectopic pregnancy.

Inclusion criteria:

Women with a diagnosis of ectopic pregnancy in the municipality of Pinar del Río.

The variables used in the study were: age, skin color, gynecological history, risk factors, symptoms and signs, complementary diagnostic tests used as well as the surgical technique employed. The information was obtained by reviewing and analyzing the medical records of patients who underwent surgery for ectopic pregnancy, using descriptive statistics.

The ethical principles of the II Helsinki Convention were complied with in order to carry out the research.

RESULTS

It was found that the highest incidence of ectopic pregnancy was in the age group 15-25 years (46,8 %), with the white race being more affected.

Table 1. Frequency distribution of patients diagnosed with ectopic pregnancy according to age groups and race.

Age groups	Race of patients						Total	
	White		Black		Mestizo			
	No.	%	No.	%	No.	%	No.	%
15-25	22	35,4	4	6,6	3	4,8	29	46,8
26-35	12	19,4	3	4,8	5	4,8	20	29
36-45	7	11,3	3	4,8	3	8,1	13	24,2
Total	41	66,1	10	16,2	11	17,7	62	100

Source: Individual medical records

In terms of gynecological history, the highest incidence was pelvic inflammatory disease accounting for 35 % of cases.

Table 2. Frequency distribution of patients according to gynecological history of ectopic pregnancy.

Gynecological history	n	%
Pelvic inflammatory disease	22	35
Induced abortions	15	24
Intrauterine devices	13	21
Previous ectopic pregnancy	5	8
Bilateral partial salpingectomy	7	11

Source: Individual medical records

In terms of risk factors associated with ectopic pregnancy, the highest incidence was intrauterine devices in 33,8 % of cases.

Table 3. Distribution of risk factors according to age groups.

Age groups	Risk factors												Total	
	CTA		T		ICT		EMA		M		DIU		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
15-25	2	3,2	5	8,1	9	14,4	0	0	3	4,9	10	16,2	29	46,8
26-35	2	3,2	6	9,6	1	1,7	0	0	2	3,2	9	14,4	20	32,1
36-45	1	1,7	1	1,7	1	1,7	6	9,6	2	3,2	2	3,2	13	21,1
Total	5	8,1	12	19,4	11	17,8	6	9,6	7	11,3	21	33,8	62	100

Source: Individual medical records

*CTA: Previous tubal surgery, T: Smoking, CTI: Chlamydia Trachomatis infection, AMA: Advanced Maternal Age, M: Multiparity, IUD: Intrauterine Device.

The most frequent symptoms in the patients were pelvic pain, menstrual delay and bloody losses, in 37 % of the cases.

Table 4. Frequency distribution of the most frequent symptoms that constitute the reason for consultation for the patients.

Symptoms and signs	No.	%
Pelvic pain, delayed menstruation and bloody leakage	23	37
Pelvic pain and delayed menstruation	18	29
Pelvic pain and bloody leakage	6	10
Pregnancy symptoms	8	13
Pelvic pain	5	8
Lipothymia	2	3

Source: Individual medical records

Ultrasound proved to be the most effective adjunct in the diagnosis of ectopic pregnancy, being effective in 40,3 % of cases.

Table 5. Distribution of complementary tests with diagnostic value according to age groups.

Age groups	Complementary								Total	
	FBGC		O		USG		LD		No.	%
	No.	%	No.	%	No.	%	No.	%		
15-25	2	3,2	3	4,8	12	19,4	12	19,4	29	46,8
26-35	2	3,2	3	4,8	7	11,3	8	12,8	20	32,1
36-45	1	1,7	4	6,6	6	9,6	2	3,2	13	21,1
Total	5	8,1	10	16,2	25	40,3	22	35,4	62	100

Source: Individual medical records

**FBGCF: human chorionic gonadotropin beta fraction, O: urine, USG: ultrasound and L: diagnostic laparoscopy.

The surgical technique with the highest incidence was left salpingectomy in 38.7 % of cases operated for ectopic pregnancy.

Table 6. Distribution of the most commonly used surgical techniques according to age groups.

Age groups	Surgical Techniques						Total	
	SI		SD		SB		No.	%
	No.	%	No.	%	No.	%		
15-25	9	14,4	10	16,2	10	16,2	29	46,8
26-35	10	16,2	6	9,6	4	6,5	20	32,1
36-45	5	8,1	5	8,1	3	4,8	13	21,1
Total	24	38,7	21	33,8	17	27,5	62	100

Source: Individual medical records

***SI: Left Salpingectomy, SD: Right Salpingectomy, SB: Bilateral Salpingectomy.

DISCUSSION

Ectopic pregnancy is a pregnancy in which the fertilized egg implants in tissue outside the uterus. The most common site of this implantation is the fallopian tube. However, ectopic pregnancies can occur in the ovary, abdomen and cervix.⁽⁷⁾

In our study, it was found that the highest incidence of ectopic pregnancy is in the age group between 15 and 25 years (47 %), with the white race being more affected.

In the study by Rivera Ramos,⁽⁸⁾ he points out that age is not a determining factor. Ageing generates a progressive loss of myoelectric activity along the fallopian tube, which could be the cause of the increased frequency of tubal pregnancy, together with the hormonal changes typical of this stage of reproductive life, which also have an effect on tubal activity.

Cabezas Cruz,⁽⁹⁾ in Chile, the average age of EE cases was 29,4 years, Rivera Ramos,⁽⁸⁾ reported similar statistics to those reported in the present investigation, with a higher percentage of EE in patients under 25 years of age. In a study by Tu J,⁽¹⁰⁾ EoE occurred more frequently in younger patients.

Thirty-five percent of patients diagnosed with ectopic pregnancy had a history of pelvic inflammatory disease. Torres Rojas,⁽¹¹⁾ identified childbirth and abortion as relevant obstetric antecedents, and reported that the highest number of cases, 35,7 %, had this history.

Several studies point to PID as being responsible for structural and functional damage to the fallopian tubes, a condition conducive to ectopic gestation, for example, Balash points out that there is a proportional relationship between the occurrence of EP after an episode of PID. Oliva concluded that 10-50 % of patients with EP have a history of PID and the incidence of histological evidence of previous salpingitis is 40 %.⁽¹²⁾

In a study by Moya Toneut.⁽¹³⁾ Regarding risk factors for ectopic pregnancy, the highest incidence was intrauterine devices with 34 %. The use of IUDs has been reported by many researchers to prevent intrauterine pregnancy and to have no effect on intrauterine implantation.⁽¹⁴⁾

The US National Library of Medicine (MNB) recognizes abdominal pain as one of the most relevant symptoms in patients suffering from ectopic pregnancy.⁽¹⁰⁾ In the present study, the most frequent symptoms that motivated the consultation of affected patients were pelvic pain, menstrual delay and bloody leakage. According to the study "Epidemiology of ectopic pregnancy in an obstetrics and gynecology hospital" similar to the present one, the main clinical manifestation found was pelvic pain, 98,9 %.⁽¹⁵⁾

The most frequent symptoms reported in patients suffering from ectopic pregnancy are the following: menstrual delay, subjective symptoms of pregnancy (swollen, painful breasts, vomiting, nausea, etc) and the presence in a large number of cases of abdominal pain and blood spotting, plus the signs to look for on physical examination without: abdominal pain on palpation, peritoneal reaction, vaginal examination describing the presence of an adnexal tumor mass and pain on mobilization of the genitalia.^(16,17)

Chirino Acosta,⁽¹⁸⁾ points out that a good clinical method was, is and will be the most important in the diagnosis of EE. In the USA, the beta fraction of HCG and the use of ultrasound are two fundamental elements in the diagnosis of EP, and he points out that laparoscopy has a low diagnostic failure rate of 0,01 %.

Leite J,⁽¹⁹⁾ points out that in 50 % of cases a diagnosis can be established with clinical elements. Several studies point out that the diagnosis of ES is easier when it is ruptured, a postulate with which several researchers agree, but this is not precisely what we are aiming for, the ideal would be to prevent them, and then, once they are established, to diagnose them before they rupture.

The surgical technique most commonly used in the case of ectopic pregnancy was left salpingectomy, followed by right salpingectomy and bilateral salpingectomy.⁽²⁰⁾

The authors of the present investigation fully support the theory of performing bilateral partial salpingectomy in all patients with EP, due to the high risk of recurrence in these patients, as tubal damage is usually bilateral. Although in tubal EUS, tubal preservation treatment can only

be performed when it is diagnosed safely and quickly; the earlier the diagnosis, the greater the chance of preserving the functioning tube.

Guzman Toro,⁽²¹⁾ points out that when salpingectomy is performed in patients with no history of previous surgery, the incidence of intrauterine pregnancy is approximately 75-81 % compared to 36 % when there is a history of previous surgery or a macroscopically damaged contralateral tube.

CONCLUSIONS

In the gynecology and obstetrics ward of the "Abel Santamaría" Hospital, the number of consultations of women diagnosed with ectopic pregnancy has increased, being the municipality of Pinar del Río the one with the highest incidence. Ectopic pregnancy is a health problem, which is why it is necessary to create new ways and methods for the management of the risk factors of this condition.

Conflict of Interest

The authors declare no conflict of interest.

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Authorship

YCLO and EECF: conceptualization, data curation, validation and formal analysis and supervision.

YGLG and ECP: research, methodology, project management and software.

RGV: visualization, original drafting, drafting-revising and editing.

Additional material

Additional material to this article can be consulted in its electronic version available at:

www.revcompinar.sld.cu/index.php/publicaciones/rt/suppFiles/6014

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