

LAPAROSCOPIC FINDINGS OF ENDOMETRIOSIS IN PATIENTS AT CLÍNICA FÉRTIL - REPRODUÇÃO HUMANA IN GOIÂNIA-GO

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ABSTRACT

Endometriosis is a pathological condition which endometrial cells develop outside the uterine cavity. The symptoms are varied (pelvic pain, dyspareunia, dysmenorrhea, among others) and the severity depends on the anatomical location affected. In addition, the pathology can stricken patients of any age, but it is most often found in women of reproductive age. In this regard, understanding the epidemiological profile of endometriosis can help in the development of health policies and in the knowledge of the risk of disease progression when untreated over time. In this work, 1400 reports of videolaparoscopies were analyzed, carried out in the period from 2015 to 2021, attended at the Fértil - Reprodução Humana (Goiânia-GO) clinic, laparoscopy exams performed in women aged 16 to 50 years were selected, who had endometriosis findings following the American Fertility Society staging. Subsequently, the data collected were systematized (according to age group, stage of endometriosis and the laparoscopic findings of endometriosis) and presented using graphical tools. From the analysis of selected and analyzed group (n = 206), the highest number (n = 18) was observed for women aged 34 years, representing 8.7%. Concerning the classification of the stage of the disease, stage IV was prevalent in the entire age group studied (< 35 years; 29.2%) and (35-50 years; 39.7%). Moreover, the most predominant laparoscopic finding of endometriosis was in the pouch of Douglas (n = 134; 65%). Thus, the identification of the epidemiological profile (age group/frequency, stage of endometriosis and laparoscope finding) will open the way for the determination of more efficient means for diagnosis and, consequently, effective treatment that does not present side effects.

KEYWORDS: ENDOMETRIOSIS; LAPAROSCOPIC FINDINGS; DIAGNOSIS; AMERICAN FERTILITY SOCIETY

INTRODUCTION

The prevalence of endometriosis in the world's female population of reproductive age from all ethnic and social groups is between 5% and 10% (approximately 190 million)¹. It is a benign, chronic, estrogen-dependent and multifactorial pathology, which presents itself in the form of cysts and/or nodules in different places in the body. It is known that there is prevalence in the ovaries, the posterior cul-de-sac, the broad ligament and the uterosacral ligament^{2,3}.

The main clinical characteristics of this pathology are dysmenorrhea, dyspareunia and severe, chronic or acyclic pelvic pain, which in most cases coincides with menstruation⁴. There may also be other symptoms such as: dysuria, hematuria, urinary frequency and urinary urgency, abdominal distension, dyschezia, constipation, hematochezia, and anal pain. On the other hand, it is necessary to point out that some patients may be oligosymptomatic or even asymptomatic⁴.

Regarding its diagnosis, anamnesis and physical examination are able to identify approximately 70% of cases of endometriosis. In this context, it is noteworthy that the presence

of nodules or blackened roughness in the cul-de-sac after speculum examination are findings that suggest the disease. In addition, to the touch, the mobility of the uterus can be investigated, if reduced it can be indicative of pelvic adhesions. Furthermore, painful nodules in the posterior cul-de-sac may be associated with retrocervical lesions, uterosacral ligament, vaginal or intestinal wall. Under the same bias, adnexal masses may be related to endometriomas⁴.

O expressivo desenvolvimento da Obstetrícia nas últimas décadas, associado ao ingresso de novas tecnologias, têm proporcionado diminuição do atraso no diagnóstico e consequentemente melhor assistência aos pacientes⁶. Todavia, ainda hoje, a média estimada do tempo entre o início dos sintomas até o diagnóstico definitivo é de sete anos^{4,5}.

The expressive development of Obstetrics in recent decades, associated with the entry of new technologies, has provided a reduction in the delay in diagnosis and, consequently, better patient care⁶. However, even today, the estimated average time between the onset of symptoms and the definitive diagnosis is seven years^{4,5}.

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Therefore, when the suspicion of the pathology is identified, it is necessary to use other auxiliary methods for the confirmation and staging of the disease. In this context, pelvic and transvaginal ultrasound and magnetic resonance imaging are the main methods used¹⁴. It should be noted that the definitive diagnosis is made through biopsy of the endometriotic lesion⁷.

Furthermore, biomarkers have been sought as methods of screening and early identification of endometriosis. Although promising, none of the methods developed so far has high sensitivity and accuracy for use in clinical practice¹. In this context, cancer antigen 125 (CA-125) is the most researched peripheral biomarker used in the investigation of endometriosis. Although CA-125 levels in peripheral blood have no diagnostic power for endometriosis, due to low sensitivity, serial CA-125 measurements are an important resource to help identify recurrence after clinical or surgical treatment⁸.

From this therapeutic point of view, endometriosis represents a great challenge, since, so far, there is no cure and its recurrence throughout life is known. Thus, each case should be evaluated individually, observing the symptoms, the extent of the disease, organ involvement, age and the desire to conceive⁵.

Therapeutic options are medication and/or surgery. Regardless of the treatment chosen, it is important that the patient is monitored by a multidisciplinary team with complementary therapies such as physical activity, physiotherapy and acupuncture¹⁴. Furthermore, patients with chronic pain are more likely to develop depression and stress, thus requiring psychological assistance⁴.

Currently, there is no effective prevention of endometriosis, which makes the disease even more challenging¹. Thus, it is a public health problem, with a significant impact on physical health, mainly due to chronic pain symptoms, and on mental health due to the prognosis, in many cases, coursing with depression and anxiety. In addition, it is noteworthy that the health costs involved in the diagnosis and treatment of endometriosis are high and can be similar to other chronic diseases with a high impact on global society^{14,9}.

Therefore, the present study aimed to carefully assess the prevalence of endometriosis in patients at the Clínica Fértil - Reprodução Humana in Goiânia, Goiás, from 2015 to 2021, identifying the number of women affected, the most frequent findings of this pathology and the prevalence of alterations ultrasound according to the age of the patients.

METHODOLOGY

This is a cross-sectional, descriptive, retrospective and quantitative study, with secondary data collection and approved by the Research Ethics Committee (CEP) of the Hospital e Maternidade Dona Íris (Goiânia-GO) (opinion number: 5,434,401). Initially, 1400 videolaparoscopy reports, performed in the period from 2015 to 2021, were analyzed and selected according to the following inclusion criteria: i) diagnostic lap-

aroscopy exams performed in women aged 16 to 50 years, attended at Clínica Fértil - Reprodução Humana; ii) reports that presented findings of endometriosis; iii) reports that follow the staging of the American Fertility Society¹⁰. Patients who did not meet all previously reported inclusion criteria, inconclusive, erased and/or illegible reports were excluded from the study. After collecting and systematizing the data obtained, they were described through graphical representation and analyzed in order to identify the epidemiological profile in relation to age group, stage of endometriosis and laparoscopic findings.

RESULTS AND DISCUSSION

Endometriosis is a highly prevalent pathology and has a significant social and economic impact on women's quality of life^{9,11}. Regarding its pathophysiology, a better understanding is still needed, however, it is believed that it is a multifactorial pathology, including alterations in the tubal anatomy, mechanisms of production of inflammatory mediators, with damage to the oocytes and reduction of Anti-Mullerian hormone (AMH) with impact on follicular reserve¹².

In the present study, the epidemiological profile of endometriosis was evaluated in patients at the Clínica Fértil - Reprodução Humana em Goiânia, Goiás, from 2015 to 2021, through the analysis of videolaparoscopies. In addition, the distribution of the stage of endometriosis according to age group was studied, as well as the laparoscopic findings of endometriosis in the study group were described and discussed. The information collected and analyzed relating age and findings of endometriosis can contribute to understanding the epidemiological profile of the study group and the risk of disease progression when not treated over time¹⁰.

The study started with the analysis of 1400 videolaparoscopy reports, excluding (n = 1194) the reports that did not present endometriosis findings or that did not use the American Fertility Society staging of endometriosis¹⁰, resulting in a sample of 206 reports, according to described in Figure 10.



Figure 10 - Inclusion and exclusion criteria for videolaparoscopy reports analyzed in this study.

In the selected study group (n = 206), it was possible to show the epidemiological profile regarding the age group and the laparoscopic findings of endometriosis at Clínica Fértil - Reprodução Humana in Goiânia, selecting only the reports that present findings of endometriosis and that follow the staging from the American Fertility Society (Figure 10).

From the analysis of the videolaparoscopic reports of the selected patients (n = 206), a great variation in the age of the patients was observed, as described in the histogram (Figure 11). It is noted that the selected patients were aged between 16 and 50 years, with the age of 34 years being the most quantitatively prevalent (n = 18), representing 8.7% of the total, and the lowest quantitative (n = 0) was observed for the ages of 19, 21 and 50 years. In addition, a higher prevalence was identified between 28 and 38 years old, corroborating with several studies reported in the literature (Figure 11)^{13,14,15}. Furthermore, Gheorghisan-Galateanu and Gheorghiu reported the existence of a prevalence peak between 25 and 35 years of age¹⁶.

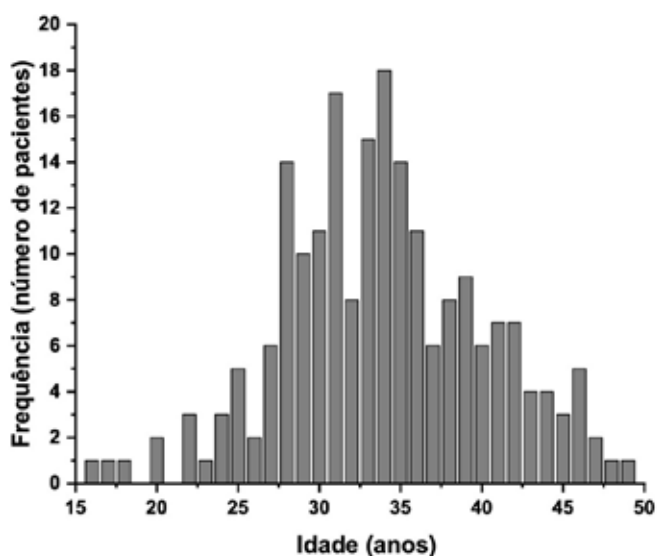


Figure 11 - Histogram of age (years) of the studied patients with endometriosis (n = 206).

Endometriosis is a hormone-dependent disease, so most symptoms tend to appear at menarche, progressing into adulthood, when the main symptoms and complications (pelvic pain and/or infertility) can finally become debilitating and require some surgical protocol¹⁷. In this context, Stochino-Loi and co-authors carried out a study with 1560 women and observed several correlations between age, the presence of nodules and the degree of the pathology. In this study, the authors described a low rate of deep colorectal nodules for women aged up to 20 years and a progressive increase in women aged up to 30 years, remaining stable after that age. The authors also observed

that the diagnosis and surgical protocols usually occur between 26 and 30 years of age. Therefore, it is suggested that early diagnosis and prevention of endometriosis should focus on women aged up to 25 years¹⁸.

In addition to understanding the relationship between age group and endometriosis, classifying the stage of endometriosis is important to verify the progress of the pathology, determine and standardize appropriate treatment protocols and facilitate doctor-doctor and doctor-patient communication¹⁹. In this sense, the American Society for Reproductive Medicine (rASRM) developed a classification, divided into four stages (I-IV) and determined by means of a sum of points (score), considering the following criteria: peritoneal implants and endometriomas (location, size and penetration), the degree of obliteration of the rectum and adhesions (extent of surface involvement and appearance), depth and degree of involvement of the affected organs²⁰. Thus, after selection of the study group (n = 206), the women were evaluated and classified according to the stages reported by the rASRM (Figure 12). In a general context, the severity of endometriosis is classified and reported according to the following stages: stage I (minimal endometriosis); stage II (mild endometriosis); stage III (moderate endometriosis) and stage IV (severe endometriosis)¹⁹.

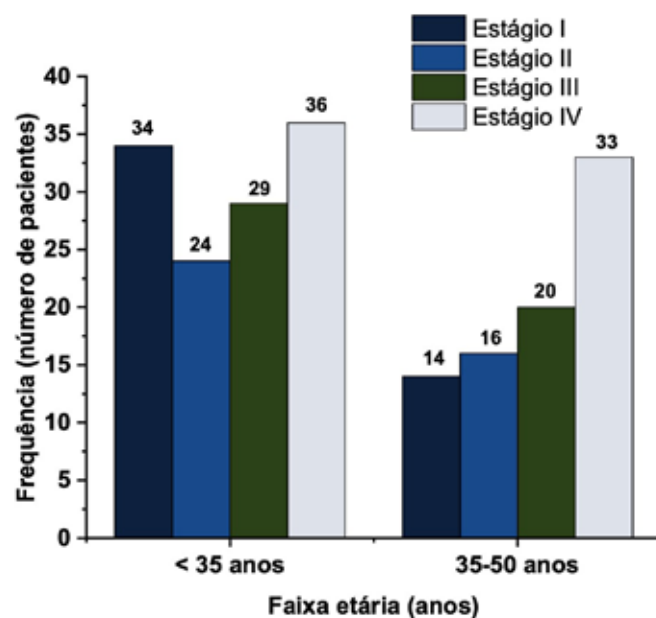


Figure 12 - Determination of stage I-IV of endometriosis according to the age group (years) of the studied population (n = 206).

From the analysis of Figure 12, 123 women aged < 35 years were evaluated, being classified according to the rASRM, presenting the following stages and quantities: stage I (n = 34 women; 27.6%); stage II (n = 24 women; 19.5%); stage III (n = 29 women; 23.5%) and

stage IV (n = 36 women; 29.2%). As for the age group between 35 and 50 years, 83 women were studied and classified: stage I (n = 14 women; 16.8%); stage II (n = 16 women; 19.2%); stage III (n = 20 women; 24.0%) and stage IV (n = 33 women; 39.7%). The classification used in the present work is the main and most widespread way to classify endometriosis in different studies and countries^{10,21,22}. In addition, it is important to emphasize that the stage of the disease is not necessarily correlated with the severity of the symptoms (for example, pain, depressive symptoms and chronic fatigue), as demonstrated by Warzecha et al²³. Therefore, the therapeutic protocols based on the classification are modified periodically and according to the clinical condition of the patient, that is, individualized²⁰.

With regard to the different stages of endometriosis, a decrease in fertility was also observed with the increase in the stage of the disease²⁴ (GUZICK et al., 1997). In this context, in line with Guzik et al²⁴, Warzecha and collaborators reported that the incidence of infertility increased with the stage of the disease (stage I-52.8%; stage II-66.7%; stage III-61.3%; stage IV-96%)²³. Furthermore, Barbosa and co-authors did not observe significant differences in live births, clinical pregnancy and spontaneous abortion, but the number of recovered oocytes was lower in women with stage III and IV endometriosis²⁵. Thus, as identified in the present study, there are a large percentage of women of childbearing age with stage IV endometriosis (severe endometriosis), with medical follow-up and treatment attempts being extremely important to avoid infertility²⁶.

Additionally, the epidemiological profile of laparoscopic findings of endometriosis was studied (Figure 13). According to the literature and clinical protocols, the evaluation should be performed in the entire female reproductive system, including the pelvic peritoneum, uterus, ovarian fossa, ovaries, uterine tubes, retrocervical region, with evaluation of the uterosacral ligaments and the cul-de-sac or pouch of Douglas²⁷. Through the analysis of laparoscopic reports (n = 206), most of them observed more than one finding per patient, totaling 334 laparoscopic findings. The observed laparoscopic findings were analyzed and divided into 6 groups, with the following quantitative: cul-de-sac (n = 134; 65.0%); ovary (n = 118; 57.2%); uterine tube (n = 33; 16.0%); ligaments (n = 25; 12.1%); bladder (n = 16; 7.7%); others (n = 8; 3.8%), as shown in Figure 13.

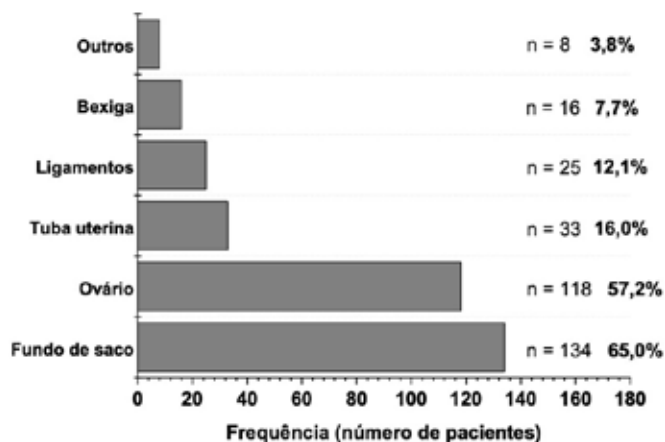


Figure 13 - Laparoscopic findings of endometriosis from Clínica Fértil - Reprodução Humana, from 2015 to 2021 (total number of patients, n = 204; total number of laparoscopic findings of endometriosis, n = 334).

From the analysis of the study group, a higher prevalence of cul-de-sac was observed (n = 134; 35.0%), and, according to the literature, the main associated symptom in these cases is dyspareunia^{5,28}. In addition, the findings of the present study are in line with the literature, presenting the cul-de-sac and the ovary as the most common areas affected by endometriosis^{28,29}.

It is also noteworthy that in the present study, the ovary was the second most affected area by the pathology (n = 118; 57.2%). It is worth mentioning that several studies indicate that there is a relationship between endometriosis and the development of cancer, with the ovary being the organ most affected by this condition^{4,30}. Thus, endometriomas diagnosed in perimenopause and/or larger than 3 cm are indicated for total removal^{4,8}.

CONCLUSION

The study of the epidemiological profile of the selected group allowed identifying that endometriosis was prevalent in patients aged between 28 and 38 years, with greater tropism for the cul-de-sac or pouch of Douglas. It is evident that in this anatomical region, dyspareunia is the predominant complaint, therefore, women with this symptomatology should be investigated presumptively, in order to rule out, as soon as possible, the diagnosis of endometriosis. Furthermore, given the findings and the complexity of the disease, screening can be suggested, especially in the geographic region targeted by the study, for women aged 25 years. All this, seeking to ensure early diagnosis, adequate treatment and, therefore, avoid the most serious conditions. Finally, it is emphasized that, at the time of diagnosis, due to the possible impacts on physical and mental health, a specialized multidisciplinary team must assist the patient in all its biopsychosocial aspects.

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