Revista Científica Escola de Saúde Pública do Ceará Paulo Marcelo Martins Rodrigues
1808-7329 (1809-0893)

ORIGINAL ARTICLE
Public / Collective Health

CLINICAL PROFILE OF PATIENTS UNDERGOING SURGERY FOR ENDOMETRIOSIS

PERFIL CLÍNICO DE PACIENTES SUBMETIDAS À CIRURGIA PARA ENDOMETRIOSE

PERFIL CLÍNICO DE PACIENTES SOMETIDAS A CIRUGÍA PARA ENDOMETRIOSIS

Eliayta Cassia dos Santos Cruz[1], *Francisco Nogueira Chaves*[2], *Lucas Ribeiro Nogueira*[3], *Mirella Fernandes de Sousa*[4] **e** *Luma Sales de Rosa*[5]

ABSTRACT
Objective: To delimit the clinical and epidemiological aspects of patients with endometriosis in a hospital in Ceará. **Methods:** Descriptive, retrospective, and cross-sectional study, analyzing data from 108 patients treated surgically. **Results:** The mean age was 37 years, and 68% of patients had children. Dienogest was the most commonly used medication for clinical treatment. Chronic pelvic pain was the main symptom (77%). In imaging exams, the most affected sites were the uterosacral ligaments, the retrocervical region, and the rectum. Hysterectomies were performed in 62% of cases, and intestinal surgeries in 64% of cases. The mean overall length of hospital stay was 4.2 days, with 10% of minor postoperative complications. **Conclusion:** The study highlights the complexity of endometriosis cases and the importance of early diagnosis and individualized treatment to improve care and the quality of life for patients.
Keywords: *Endometriosis; Epidemiology; Pelvic pain; Surgery.*

RESUMO
Objetivo: Delimitar os aspectos clínicos e epidemiológicos de pacientes com endometriose em um hospital no Ceará. **Métodos:** Estudo descritivo, retrospectivo e transversal, analisando dados de 108 pacientes tratadas cirurgicamente. **Resultados:** A média de idade foi de 37 anos e 68% das pacientes tinham filhos. O dienogeste foi a medicação mais usada para tratamento clínico. A dor pélvica crônica foi o sintoma principal (77%). Nos exames de imagem, os locais mais acometidos foram ligamentos uterossacros, a região retrocervical e o reto. Observou-se 62% de histerectomias e 64% de cirurgias intestinais. O tempo médio geral de internação foi de 4,2 dias, com 10% de complicações pós-operatórias menores. **Conclusão:** O estudo destaca a complexidade dos casos de endometriose e a importância do diagnóstico precoce e do tratamento individualizado para melhorar o cuidado e a qualidade de vida das pacientes.
Descritores: *Endometriose; Epidemiologia; Dor pélvica; Cirurgia*.

RESUMEN
Objetivo: Delimitar los aspectos clínicos y epidemiológicos de las pacientes con endometriosis en un hospital de Ceará. **Métodos:** Estudio descriptivo, retrospectivo y transversal, analizando datos de 108 pacientes tratadas quirúrgicamente. **Resultados:** La edad media fue de 37 años y el 68% de las pacientes tenían hijos. Dienogest fue el medicamento más utilizado para el tratamiento clínico. El dolor pélvico crónico fue el síntoma principal (77%). En los exámenes de imagen, los sitios más afectados fueron los ligamentos uterosacros, la región retrocervical y el recto. Se realizaron histerectomías en el 62% de los casos y cirugías intestinales en el 64% de los casos. La duración media de la estancia hospitalaria fue de 4,2 días, con un 10% de complicaciones postoperatorias menores. **Conclusión:** El estudio destaca la complejidad de los casos de endometriosis y la importancia del diagnóstico precoz y del tratamiento individualizado para mejorar la atención y la calidad de vida de las pacientes.
Descriptores: *Endometriosis; Epidemiología; Dolor pélvico; Cirugía.*

1 Escola de Saúde Pública do Ceará. Fortaleza/CE - Brasil.
2 Universidade Federal do Ceará. Fortaleza/CE - Brasil.
3 Hospital Geral de Fortaleza. Fortaleza/CE - Brasil.
4 Fortaleza/CE - Brasil.
5 Fortaleza/CE - Brasil.

INTRODUCTION

Characterized by the presence of endometrial tissue outside the uterine cavity, endometriosis is a benign, chronic, and inflammatory gynecological pathology[1,2]. Implants are mainly located in the pelvis, although they can occur in any topography[3]. Affecting around 10% of women of reproductive age, the disease has a higher prevalence between 25 and 35 years but can also manifest during postmenopause[4]. Studies demonstrate that it is present in 25% to 50% of infertile women and in up to 60% of those who present with pelvic pain[5]. Endometriosis is a disease of significant clinical relevance, impacting quality of life and interfering with numerous aspects. It also increases healthcare costs, as women are the primary users of the system[6,7,8]. Numerous theories have been put forward to explain the disease's development[5]. Sampson's theory of retrograde menstruation is the most widely accepted, though it fails to account for all possible forms of presentation and implant locations[2]. It likely has a multifactorial origin, with immunological, genetic, and epigenetic factors, dissemination via lymphatic and blood pathways, coelomic metaplasia, and the action of stem cells all contributing to the onset and progression of endometriosis[1].

The clinical presentation is varied, with major symptoms including chronic pelvic pain, dysmenorrhea, infertility, and dyspareunia. When there is intestinal or urinary involvement, patients may also present with specific complaints such as dyschezia, diarrhea, constipation, dysuria, and pollakiuria[9,10,11], however, due to the wide variety of clinical presentations, the diagnosis is often a challenge[12]. Anamnesis and physical examination, along with imaging methods such as ultrasound with mapping and magnetic resonance imaging, contribute to the investigation of the condition, which is confirmed through laparoscopy and histopathological study[4,5]. The therapeutic approach should be individualized, considering the location and severity of the lesions and the patient's desire for future pregnancy. It includes a range of options, from medical management to surgical intervention[13,14]. Furthermore, surgical treatment is indicated in cases of failure of medical therapy, organ involvement (such as intestinal and urinary obstructions), infertility, and endometriomas[1]. When there is intestinal involvement, the techniques used may include segmental resection, discoid excision, or shaving, depending on the degree of compromise[13,15,16].

Given this, it is crucial to understand the reality of this population group and its characteristics to foster advancements in patient care. The aim of this study was therefore to outline the clinical and epidemiological aspects of patients with endometriosis who underwent surgical treatment at a reference hospital for this pathology in the state of Ceará. We also sought to characterize the therapeutic management, the type of surgery performed, and the primary complications.

METHODS

This study is a descriptive, retrospective, and cross-sectional analysis. Data were collected from the electronic medical records of 270 patients from a reference hospital in the state of Ceará, who were being followed at the pelvic pain and endometriosis outpatient clinic. A total of 108 patients were included in the final analysis. The

inclusion criteria were patients who underwent surgical treatment for endometriosis, with a prior diagnosis confirmed by imaging (ultrasound or magnetic resonance imaging) or video laparoscopy, within the period of August 2020 to August 2024. Patients were excluded if they were receiving clinical follow-up without a surgical indication, were awaiting the surgical procedure, or had surgery for other medical conditions.

Data were collected using an instrument developed by the researchers. The tool was a structured table with dedicated sections for general, clinical, surgical, and post-surgical data. Data entry was performed using information from consultation records, medical progress notes, and surgical reports within the electronic health records, accessed on computers in the hospital's outpatient clinics. It was noted that some records lacked complete information on patients' social and clinical data.

The following variables were analyzed: age, city of origin, parity, symptoms, comorbidities, daily medications, presence of concomitant adenomyosis or myomatosis, previous surgeries, clinical treatment before surgery, type of surgery performed, location of endometriotic lesions, length of hospital stay, and complications after the surgical procedure. It is important to note that no information that could identify the patients was collected in this study. The research began only after approval by the Research Ethics Committee of the *Escola de Saúde Pública do Ceará* (opinion number 7.216.322) and was in compliance with the recommendations of Resolution 466/12 of the National Health Council. The collected data were organized into tables and graphs in Microsoft® Excel® 2019 and analyzed using mathematical techniques such as percentages, means, proportions, and prevalence.

RESULTS

The sample consisted of 108 patients, with a mean age of 37 years. The majority of patients were from cities in the interior of the state of Ceará, representing 75% of the sample, while only 25% were from the capital, Fortaleza. Regarding parity, 68% of the women had children, 32% were nulliparous, and 25% of those who had been pregnant had at least one miscarriage. Almost half of the patients (45%) had no reported comorbidities. Among those with comorbidities, chronic arterial hypertension (CAH) was the most prevalent (15%), followed by generalized anxiety disorder (11%) and fibromyalgia (8%). Depression and type 2 diabetes mellitus occurred with equal frequency (7%), while asthma was less common (4%).

Eighty-two patients (76%) had undergone some form of clinical treatment for endometriosis before surgery, with a clear predominance of Dienogest, used in 50 patients (61%). Combined oral contraceptives (COCs) and Desogestrel were also frequently used, accounting for 32% of therapies combined. Injectable hormonal treatments (medroxyprogesterone, goserelin) and intrauterine devices (Mirena IUD) were used in smaller proportions, at 12% and 7%, respectively. The majority of women (69%) had previously undergone a surgical procedure, with cesarean section being the most frequent at 34 occurrences (45%). Cholecystectomy was the second most common surgery (10 occurrences), followed by interventions for endometriosis treatment (10%), tubal ligation (8%), and hysterectomies (8%).

The main reported complaint was chronic pelvic pain (77%), followed by abnormal uterine bleeding (7%). Only 4 patients reported infertility as their main symptom. Nine out of every 10 patients reported pain during menstruation, and pain during sexual intercourse was present in 6 out of every 10 patients, indicating a high impact on quality of life. Complaints such as heavy periods and fatigue affected approximately 4 out of every 10 patients, while difficulty getting pregnant and pain in surgical scars had a lower prevalence, affecting 2 out of every 10 patients. Analysis of urinary complaints revealed a high prevalence of urinary symptoms in the sample; 3 out of every 10 patients reported pain during urination and increased urinary frequency. Regarding the prevalence of intestinal complaints, 6 out of every 10 patients reported bloating or abdominal distension, followed by unsatisfactory bowel movements (5 out of every 10 patients), and pain on defecation or changes in bowel habits (4 out of every 10 patients). Hydronephrosis was evidenced in only 9 women, demonstrating a prevalence of 1 case in every 10 patients.

Regarding the description of the location of pelvic lesions on imaging exams, an evaluation of the anterior and posterior compartments was considered, as described in Tables 1 and 2. The majority of patients had some type of lesion in the posterior compartment, with the most frequent lesions in the uterosacral ligaments (56%), followed by retrocervical (50%) and rectal lesions (49%). The presence of ovarian lesions was observed in 47% of patients, and in 8% there was no evaluation or the data was not recorded in the medical records. Extra pelvic location was uncommon, with only 3 cases (2.7%) of diaphragm involvement. Furthermore, imaging exams showed the presence of adenomyosis in 40% of the patients and uterine myomatosis in 24%. The mean time between the indication and the performance of surgery was 304.7 days, with a minimum period of 5 days and a maximum of 1,275 days.

Table 3 shows the type of surgical procedure performed on the patients, with hysterectomy (62%) and excision of endometriotic foci (62%) being the most frequent. Under this term, we included the excision of lesions in various pelvic locations, such as the uterosacral ligaments, peritoneum, rectovaginal septum, vesicouterine septum, and in the paracervical and pararectal regions. Fertility-sparing surgery, which maintains the uterus and the maximum possible amount of functional ovarian tissue, was performed on 29 women (26%). Regarding intestinal surgeries, 64% of cases involved this type of procedure. Of these, 32 patients underwent segmental rectosigmoidectomy (30%), 25 underwent shaving on the rectum or rectosigmoid (23%), and only 7 had discoid rectosigmoidectomy (7%).

Table 1 – Anterior Compartment Lesions (n = 108)

Location	N	%
No findings in the compartment	76	70%
Not evaluated / no data	14	13%
Distal ureter lesion	7	6%
Vesicouterine pouch lesion	5	5%
Pelvic peritoneum	4	4%
Bladder lesion	4	4%
Superior urethra	1	1%

Urachus	1	1%
Uterine wall	1	1%
Paravesical	1	1%
Round ligament	1	1%
Ureter lesion	1	1%

Source: Author's own.

Table 2 – Posterior Compartment Lesions (n = 108)

Posterior Lesions	N	%
Uterosacral ligament lesion	61	56%
Retrocervical lesion	54	50%
Rectal lesion	53	49%
Rectovaginal pouch lesion	33	30%
Sigmoid lesion	28	30%
No findings	13	12%
Not evaluated / no data	8	7%
Intestinal loops	1	1%
Extensive pelvic adhesive process	1	1%
Appendix	1	1%
Cecum	1	1%
Right fallopian tube edema	1	1%
Bilateral fallopian tube edema	1	1%
Ileocecal	1	1%
Left paracervical	1	1%
Pararectal	1	1%
Bilateral paracervical region	1	1%

Source: Author's own.

The mean general hospital stay was 4.2 days, with a minimum of 1 day and a maximum of 16 days. Patients who underwent intestinal surgery had a mean hospital stay of 4.7 days, while those who did not undergo an intestinal approach remained hospitalized for an average of 3.4 days. There were 20 cases (19%) of postoperative complications, with 10% being infections, including surgical site infection and urinary tract infection, which were considered of minor severity (Table 4).

Table 3 – Type of Surgery (n = 108).

Type of Surgery	N	%
Hysterectomy	67	62%
Excision of endometriotic foci	67	62%
Uni/bilateral salpingectomy	39	36%
Segmental rectosigmoidectomy	32	30%
Adhesiolysis	27	25%
Shaving of the rectum/rectosigmoid	25	23%
Uni/bilateral neurolysis	22	20%
Appendectomy	22	20%
Uni/bilateral oophorectomy	21	19%
Uni/bilateral adnexectomy	19	18%
Excision of a lesion in the vagina/rectovaginal septum	17	15%

Uni/bilateral oophoroplasty	15	14%
Wall endometrioma	13	12%
Discoid rectosigmoidectomy	7	7%
Excision of a bladder lesion	6	6%
Ureterolysis with Double-J stent insertion	6	6%
Ureterectomy	5	4%
Excision of a urachal lesion	4	4%
Cholecystectomy	4	4%
Metroplasty	3	3%
Shaving of the small intestine	2	2%
Enterectomy	2	2%
Excision of a diaphragm lesion	1	1%
Typhlectomy	1	1%
Excision of a urethral lesion	1	1%

Source: Author's own.

Table 4 – Postoperative Complications.

Complications	With intestinal surgery	Without intestinal surgery	Total (%)
Infection	7	4	11 (10%)
Ureter lesion	3	0	3 (3%)
Intestinal obstruction	2	1	3 (3%)
Fistula	1	1	2 (2%)
Rectoanal anastomotic dehiscence	1	0	1 (1%)

Source: Author's own.

DISCUSSION

Endometriosis is a prevalent disease among women of reproductive age, as substantiated by the literature[9,10,11], and the mean age of 37 years in our patient cohort corroborates this finding. The fact that the majority of patients originated from the interior of Ceará is likely due to the hospital's status as a state-wide reference center for high-complexity cases. We observed that most patients had a history of pregnancy (68%), with only 25% reporting episodes of abortion. These figures are consistent with findings from Deus *et al.*[17] (2014), who reported an abortion rate of 30% in women with chronic pelvic pain.

A research conducted in Italy and the United States of America has documented the presence of comorbidities associated with endometriosis, with a focus on psychiatric disorders such as anxiety and depression, with rates as high as 98% for depressive symptoms and 87.5% for anxiety symptoms. In addition, chronic pain-related pathologies such as migraine and fibromyalgia were also highlighted[7,18]. The intensity and duration of the pain negatively impact a patient's well-being. Leuenberger *et al.*[6] (2022) found that up to 50% of women experience pain despite treatment, which has moderate to severe effects on all areas of life, including social, professional, and domestic functioning. Recent evidence suggests that innervation, central nervous system interaction, and sensitizing factors may have a more significant role in the development

of pain and coexisting chronic pain syndromes than the mere location of the implants[1]. The majority of patients (76%) attempted some form of clinical treatment before surgery. Among the most frequently used medications, dienogest was the primary choice (61%), reinforcing the prevalence of its use, consistent with a study by Pannain *et al*.[9] (2022), in which almost half of the sample was either using or had used dienogest.

Previous abdominal surgeries may be linked to chronic pelvic pain, frequently resulting from adhesions. This condition can act as a differential diagnosis for endometriosis or, in some cases, may even contribute to its development, as is seen with abdominal wall endometriomas[17]. Our analysis showed that 69% of patients had a history of abdominal surgeries, most commonly a cesarean section. This finding is consistent with research by Deus *et al.*[17] (2014). Sharing a similar pathophysiological mechanism with endometriosis, adenomyosis may be highly co-prevalent, contributing to more intense symptoms and an increase in associated obstetric complications[9,10].

Regarding the main symptom, chronic pelvic pain was the most reported complaint by the patients, corroborating a study conducted in São Paulo by Bellelis *et al.*[10] (2010), in which over 50% of the women referred to this symptom. Infertility was a less frequently reported primary symptom in our cohort. Abdominal distension, dyschezia, and altered bowel habits were common complaints among our patient population. Urinary tract symptoms were found to have a higher prevalence than commonly reported in the literature, as seen in the study by Bellelis *et al.*[10] (2010), in which 11% reported urinary complaints. This high prevalence is likely due to the hospital's status as a reference center for the treatment of advanced-stage cases, which introduces a selection bias. Pannain *et al.*[9] (2022) observed in their study that the most affected sites for endometriotic foci were the ovaries, uterosacral ligaments, the retrocervical region, and the rectosigmoid. In our analysis, we found similar results.

Due to the associated risks, such as a reduction in ovarian reserve and the inability to prevent disease progression or recurrence, surgical treatment for endometriosis must be carefully indicated. In our study, hysterectomy was the most common procedure performed (62%), a prevalence that exceeds those reported in other studies, which typically range from 12% to 40%[15,16]. The discrepancy in hysterectomy rates may be explained by the presence of associated pathologies (adenomyosis, myomatosis) and the absence of reproductive desire among many patients. Regarding ovarian lesions, treatment was necessary in 51% of women, a result that aligns with the findings of Pannain *et al*.[9] (2022), with about 60% of ovarian involvement in patients operated on via videolaparoscopy. Evidence suggests that fertility rates may improve following surgical treatment for endometriosis lesions, particularly in cases of intestinal involvement. Hudelist *et al*.[13] (2018) reported an overall post-surgical pregnancy rate of 63.4%.

While the literature points to an occurrence of about 30% of intestinal endometriosis, our sample showed a higher rate of 64%. This discrepancy can be attributed to the service's role as a reference center, which treats a higher proportion of complex cases. The surgical technique was chosen intraoperatively, and most patients underwent segmental resection (30%), followed by shaving (23%) and discoid resection

(7%). These results, along with general postoperative outcomes regarding quality of life improvement, symptom reduction, and complication rates, are consistent with those reported in other studies[13,15,16].

The type of surgical approach influences the mean hospital stay, which tends to be longer for patients who undergo segmental resection[15,16]. We found that the length of hospital stay was longer for patients who underwent surgery involving intestinal lesions. Postoperative complications can vary and include infections, anastomotic dehiscence, organ damage, fistula development, intestinal obstruction or perforation, thromboembolic events, and urinary retention. While the total complication rate in the literature ranges from 6% to 18%, our study found a rate of 19%, which may be an overestimation due to the small sample size. Based on the analyses of Barchi *et al.*[15] (2024) and Parra *et al.*[16] (2022), severe postoperative complications, such as fistulas and urinary complications, were reported in a small number of women, showing incidence rates of 2.6% and 2.7%, respectively.

A larger sample would have provided more robust data, which could have facilitated the analysis of additional associations and a longitudinal evaluation of the patients. Additionally, a selection bias may exist, as the patients were drawn from a reference center for endometriosis, meaning the hospital predominantly handles more severe and complex cases. Consequently, the generalizability of the findings is limited. Another study limitation was the lack of histological confirmation of endometriosis in surgical specimens, which, if available, would have strengthened the diagnostic accuracy and supported the procedural appropriateness.

CONCLUSION

This study outlined the clinical profile of women with endometriosis treated at a reference center in Ceará, demonstrating a predominance of chronic pelvic pain, posterior compartment lesions, and high surgical complexity, as evidenced by the significant number of patients with intestinal involvement.

The findings reinforce that understanding the profile of patients in a specific region helps to comprehend their characteristics. This, in turn, enables healthcare professionals to provide more efficient and early diagnoses, along with directed and individualized treatment. Furthermore, this knowledge contributes to the development of more effective guidelines and care strategies for managing this condition, consequently leading to an improved quality of life for these women.

REFERENCES

1. Chapron C, Marcellin L, Borghese B, Santulli P. Rethinking mechanisms, diagnosis and management of endometriosis. Nat Rev Endocrinol [Internet]. 2019 [cited 2025 Mar 3] Nov;15(11):666-682. DOI: https://doi.org/10.1038/s41574-019-0245-z.

2. Saunders PTK, Horne AW. Endometriosis: Etiology, pathobiology, and therapeutic prospects. Cell [Internet]. 2021 [cited 2025 Jan 15] May 27;184(11):2807-2824. DOI: https://doi.org/10.1016/j.cell.2021.04.04.

3. Cervantes GV, Ribeiro PAAG, Tomasi MC, Farah D, Ribeiro HSAA. Sexual Function of Patients with Deep Endometriosis after Surgical Treatment: A Systematic Review. Rev Bras

Ginecol Obstet [Internet]. 2023 [cited 2025 Jan 15];45 (11):729–44. DOI: https://doi.org/10.1055/s-0043-1772596.
4. Parasar P, Ozcan P, Terry KL. Endometriosis: Epidemiology, Diagnosis and Clinical Management. Curr Obstet Gynecol Rep [Internet]. 2017 [cited 2025 Feb 25] Mar;6(1):34-41. DOI: https://doi.org/10.1007/s13669-017-0187-1.
5. Taylor HS, Kotlyar AM, Flores VA. Endometriosis is a chronic systemic disease: clinical challenges and novel innovations. Lancet [Internet]. 2021 [cited 2025 Jan 15] Feb 27;397(10276):839-852. DOI: https://doi.org/10.1016/S0140-6736(21)00389-5.
6. Leuenberger J, Kohl Schwartz AS, Geraedts K, Haeberlin F, Eberhard M, von Orellie S, et al. Living with endometriosis: Comorbid pain disorders, characteristics of pain and relevance for daily life. Eur J Pain [Internet]. 2022 [cited 2025 Mar 3] May;26(5):1021-1038. DOI: https://doi.org/10.1002/ejp.1926.
7. Szypłowska M, Tarkowski R, Kułak K. The impact of endometriosis on depressive and anxiety symptoms and quality of life: a systematic review. Front Public Health [Internet]. 2023 [cited 2025 Jan 15] Sep 6;11:1230303. DOI: https://doi.org/10.3389/fpubh.2023.1230303.
8. Lins dos Santos R, Tonin Beneli Fontanezi C, da Silva Negreiros FD, Maria Correia Pequeno A. Perfil clínico-epidemiológico de pacientes atendidos em uma clínica escola de um centro universitário de Fortaleza. Cadernos ESP [Internet]. 2020 [cited 2025 Mar 3];14(1):30-7. Disponível em: https://cadernos.esp.ce.gov.br/index.php/cadernos/article/view/209.
9. Pannain GD, Ramos BS, Souza LC, Salomão LR, Coutinho LM. Perfil epidemiológico e assistência clínica a mulheres com endometriose em um hospital universitário público brasileiro. Femina. 2022;50(3):178-83.
10. Bellelis P, Dias Jr JA, Podgaec S, Gonzales M, Baracat EC, Abrão MS. Aspectos epidemiológicos e clínicos da endometriose pélvica: uma série de casos. Rev Assoc Med Bras [Internet]. 2010 [cited 2025 Feb 25];56(4):467–71. DOI: https://doi.org/10.1590/S0104-42302010000400022.
11. Cardoso JV, Machado DE, Silva MC da, Berardo PT, Ferrari R, Abrão MS, et al. Epidemiological profile of women with endometriosis: a retrospective descriptive study. Rev Bras Saude Mater Infant [Internet]. 2020 [cited 2025 Feb 25] Oct;20(4):1057–67. DOI: https://doi.org/10.1590/1806-93042020000400008.
12. Costa HD da, Almeida CCM, Reis CFB, de Brito EMM, Cerqueira HOM, Santos JEM, et al. Endometriose no Brasil: perfil epidemiológico das internações nos últimos dez anos (2013-2022). Braz J Hea Rev [Internet]. 2023 [cited 2025 Mar 3] May;6(3):9484-95. DOI: https://doi.org/10.34119/bjhrv6n3-087.
13. Hudelist G, Aas-Eng MK, Birsan T, Berger F, Sevelda U, Kirchner L, et al. Pain and fertility outcomes of nerve-sparing, full-thickness disk or segmental bowel resection for deep infiltrating endometriosis-A prospective cohort study. Acta Obstet Gynecol Scand [Internet]. 2018 [cited 2025 Jan 15] Dec;97(12):1438-1446. DOI: https://doi.org/10.1111/aogs.13436.
14. Cardoso WC, Oliveira SS, Silveira VF, Cerqueira IV, Messias YP, Souza MV, et al. Análise das características clínico-epidemiológicas da endometriose no Brasil. Research, Society and Development [Internet]. 2024 [cited 2025 Mar 3] May;13(4):e11813445586. DOI: http://dx.doi.org/10.33448/rsd-v13i4.45586.
15. Barchi LC, Callado GY, Machado RB, Chico MA, Damico DC, Lacerda DP, et al. Intestinal endometriosis: outcomes from a multidisciplinary specialized referral center. ABCD, arq bras cir dig [Internet]. 2024 [cited 2025 Mar 3]; 37:e1806. DOI: https://doi.org/10.1590/0102-6720202400013e1806.
16. Parra RS, Valério FP, Zanardi JVC, Feitosa MR, Camargo HP, Féres O. Postoperative complications and stoma rates after laparoscopic resection of deep infiltrating endometriosis

with bowel involvement. Rev Bras Ginecol Obstet [Internet]. 2022 [cited 2025 Mar 3] Nov;44(11):1040–6. DOI: https://doi.org/10.1055/s-0042-1756212.
17. Deus JM de, Santos AFR dos, Bosquetti R de B, Pofhal L, Alves Neto O. Analysis of 230 women with chronic pelvic pain assisted at a public hospital. Rev dor [Internet]. 2014 [cited 2025 Feb 25]; 15(3):191–7. DOI: https://doi.org/10.5935/1806-0013.20140042.
18. Alves DAMB, Souza N da SF, Borges Junior WS, Conde DM, Siqueira-Campos VM, Deus JM de. Prevalence and impact of comorbidities in women with chronic pelvic pain. BrJP [Internet]. 2024 [cited 2025 Jan 15];7 :e20240026. DOI: https://doi.org/10.5935/2595-0118.20240026-en.