International Journal of Medical Science and Clinical Research Studies

ISSN(print): 2767-8326, ISSN(online): 2767-8342

Volume 05 Issue 03 March 2025

Page No: 478-481

DOI: https://doi.org/10.47191/ijmscrs/v5-i03-12, Impact Factor: 8.188

Prevalence of Adenomyosis in Patients Hysterectomized for Other Benign Uterine Pathology in the General Hospital of Cancun in the Year 2021 - 2023.

Gerardo Ivan Blanco Arjona[1], María Eugenia Núñez Ramírez[2], Martha Giselle García Valencia[1], Diana Laura Padilla Osornio[1], Valeria Traconis Díaz[3]

[1]Gynecology and Obstetrics Resident. Hospital General de Cancún "Dr. Jesús Kumate Rodríguez", Secretaría de Salud. Facultad de Medicina de la Universidad Autónoma de Yucatán.

[2]Gynecologist and Obstetrician. Hospital General de Cancún "Dr. Jesús Kumate Rodríguez", Secretaría de Salud.

[3]MD Universidad Marista de Mérida. Master's Degree in Translational Medicine, Complutense University of Madrid.

ABSTRACT

Introduction: Adenomyosis is a benign pathology of the uterus characterized by the infiltration of endometrial tissue into the myometrium, resulting in symptoms such as dysmenorrhea, abnormal uterine bleeding and chronic pelvic pain. Its diagnosis remains a challenge due to the reliance on post-hysterectomy histopathological analysis and the limited accuracy of imaging methods. This study aims to determine the prevalence of adenomyosis in patients undergoing hysterectomy for benign pathologies of the uterus at the General Hospital of Cancun during the period 2021-2023.

Material and Methods: An observational, descriptive, cross-sectional study was carried out in which 114 patients who underwent hysterectomy for benign pathologies of the uterus were analyzed. Sociodemographic data, type of pathology and histopathologic diagnosis of adenomyosis were collected. Frequencies and percentages were calculated for prevalence, and chi-square and Student's t-tests were applied to evaluate associations between variables.

Results: The prevalence of adenomyosis was 21.9% in the population studied. No significant differences were found between the presence of adenomyosis and the baseline benign pathology ($p > 0.05$). The mean age of patients with adenomyosis was 44.64 years, with no significant differences with the group without diagnosis of adenomyosis ($p = 0.48$). Logistic regression showed no significant associations between age or benign pathology with the diagnosis of adenomyosis.

Conclusion: Adenomyosis is a frequent entity in patients hysterectomized for benign pathologies of the uterus. Although the definitive diagnosis remains dependent on histopathologic study, these findings underscore the importance of considering this pathology in the preoperative evaluation. Limitations of the study include the low number of cases in 2021 due to the pandemic and the lack of complete information in some clinical records. Prospective studies with more accurate preoperative diagnostic methods are required to improve detection and management of this disease

KEYWORDS: Adenomyosis, Prevalence, Hysterectomy, Histopathological Diagnosis

ARTICLE DETAILS

Published On:
11 March 2025

Available on:
https://ijmscr.org/

INTRODUCTION

Adenomyosis is a benign disease of the uterus characterized by the invasion of endometrial tissue into the myometrium, exceeding a depth of 2.5 mm below the endometrial basal layer (1). Its diagnosis has historically been challenging due to the reliance on post-hysterectomy histopathologic analysis, which has made it difficult to obtain accurate epidemiologic data and has limited its recognition in clinical practice (2). Currently, the actual prevalence of adenomyosis remains to

be accurately determined, as most studies include only women who have undergone hysterectomy (3,4).

The most frequent symptoms include chronic pelvic pain, dysmenorrhea, menorrhagia and, in some cases, dyspareunia, although up to 30% of patients may be asymptomatic (5). The pathophysiology of pain in adenomyosis has been associated with increased expression of oxytocin receptors and uterine hyperperistalsis, as well as alterations in myometrial innervation (5). Likewise, abnormal uterine bleeding may be related to myometrial hypertrophy and increased vascularization, with a correlation between the depth of endometrial invasion and the severity of bleeding (6).

In addition to its symptomatic manifestations, adenomyosis can affect fertility by altering endometrial receptivity, interfering with sperm migration and modifying myometrial contractility. These alterations can influence embryo implantation and increase the risk of obstetric complications, such as intrauterine growth restriction, postpartum hemorrhage and preeclampsia (7,8).

Clinical diagnosis has improved with the incorporation of imaging tools, with transvaginal ultrasound being the first line of evaluation due to its accessibility and specificity varying between 65% and 100%. MRI complements the diagnosis with greater precision, especially in doubtful cases or when a detailed characterization of the disease is required (9,10).

Management of adenomyosis varies according to the severity of symptoms and the patient's reproductive expectations. Therapeutic options include medical treatments such as non-steroidal anti-inflammatory drugs, progestins and levonorgestrel intrauterine devices, as well as more invasive approaches such as uterine artery embolization or endometrial ablation. In refractory cases or in patients who do not wish to preserve fertility, hysterectomy remains the definitive treatment (11,12).

Given the clinical impact of adenomyosis and the absence of local studies on its prevalence in patients undergoing hysterectomy for benign pathologies, this study seeks to determine the frequency of this condition in a specific population, providing information that could contribute to improve its diagnosis and clinical management.

MATERIAL AND METHODS

An observational, descriptive, cross-sectional study was carried out to determine the prevalence of adenomyosis in patients undergoing hysterectomy for benign pathologies of the uterus at the General Hospital of Cancun during the period from January 2021 to December 2023.

The study population consisted of all women who underwent hysterectomy for benign pathologies of the uterus at the General Hospital of Cancun during the study period. A total of 116 medical records were reviewed, distributed as follows: 4 patients in 2021, 58 in 2022 and 52 in 2023. The benign pathologies considered were uterine myomatosis, obstetric hemorrhage, uterine prolapse, uterine abscess and endometrial hyperplasia.

Patients undergoing hysterectomy with a confirmed diagnosis of benign pathology of the uterus by histopathological report were included. Those with a diagnosis of malignant pathology of the uterus were excluded, as well as those with incomplete clinical records or with insufficient information to confirm the diagnosis.

Stratified probability sampling was performed with the aim of ensuring equal representation of the different types of benign pathologies of the uterus. The sample size was established according to the total available population, ensuring the inclusion of a sufficient number of cases to obtain a representative estimate of the prevalence of adenomyosis.

The variables analyzed in the study included age, expressed in years, and the type of benign uterine pathology, categorized into uterine myomatosis, obstetric hemorrhage, uterine prolapse, uterine abscess and endometrial hyperplasia. The dependent variable was the diagnosis of adenomyosis, which was confirmed by histopathological study and coded as a dichotomous variable (0=No, 1=Yes).

For data collection and processing, a systematic review of the medical records was carried out to obtain sociodemographic, clinical and histopathologic information on the patients. The data were organized in a structured database and analyzed using SPSS v.25 statistical software.

Continuous variables were described by measures of central tendency (mean, median) and measures of dispersion (standard deviation), while categorical variables were expressed as absolute and relative frequencies. The prevalence of adenomyosis was determined as the proportion of patients with a confirmed diagnosis over the total sample, expressed as a percentage, with its corresponding 95% confidence interval. To evaluate differences in the prevalence of adenomyosis according to the type of benign pathology, the Chi-square test was used. Likewise, Student's t-test for independent samples was applied to compare age between patients with and without a diagnosis of adenomyosis. A significance level of $p < 0.05$ was established to determine statistically significant differences.

The present study was developed in accordance with the ethical principles of the Declaration of Helsinki and was approved by the Ethics Committee of the General Hospital of Cancun. Since this was a retrospective analysis based on secondary data, anonymization and confidentiality of the information of the patients included in the study was guaranteed.

RESULTS

A total of 114 patients undergoing hysterectomy for benign pathologies of the uterus in the General Hospital of Cancun between 2021 and 2023 were included. The annual

distribution of cases was 4 patients in 2021 (3.5%), 58 patients in 2022 (50.9%) and 52 patients in 2023 (45.6%).

The histopathological diagnosis of adenomyosis was confirmed in 25 of the 114 patients (21.9%). In the analysis by year, 2 cases were identified in 2021 (50%), 12 cases in 2022 (20.7%) and 11 cases in 2023 (21.2%). No statistically significant differences were found in the prevalence of adenomyosis between the years analyzed.

The patients included in the study had different benign pathologies as surgical indications. The most frequent pathology was uterine myomatosis, diagnosed in 103 patients (90.3%), followed by uterine prolapse in 5 patients (4.4%), endometrial hyperplasia in 3 patients (2.6%) and uterine abscess in 3 patients (2.6%). Table 1 shows the distribution of the prevalence of adenomyosis according to the benign pathology diagnosed.

Table 1. Prevalence of adenomyosis according to uterine benign pathology in hysterectomized patients at the General Hospital of Cancun (2021-2023).

Benign Patology	Patient (n)	Adenomyosis cases (n)	Prevalence (%)
Uterine Myomatosis	103	23	22.3
Uterin Prolapse	5	1	20.0
Uterine Abscess	3	0	0.0
Endometrial Hyperplasia	3	1	33.3
Total	114	25	21.9

Analysis by chi-square test showed no statistically significant differences in the prevalence of adenomyosis between the different types of benign pathologies ($p > 0.05$).

Age analysis showed that the mean in patients with a diagnosis of adenomyosis was 44.64 years (SD = 5.73), while in patients without a diagnosis of adenomyosis it was 44.54 years (SD = 9.71). Student's t-test showed no statistically significant differences between the two groups ($p = 0.48$).

Inferential analysis by binary logistic regression did not identify significant associations between age or type of benign pathology with the presence of adenomyosis.

DISCUSSION

Adenomyosis is a gynecological pathology characterized by the infiltration of endometrial tissue into the myometrium, which generates symptoms such as dysmenorrhea, abnormal uterine bleeding and chronic pelvic pain (1). However, its diagnosis remains a challenge due to the dependence on post-hysterectomy histopathological analysis and the low accuracy of preoperative diagnostic methods in previous studies (2).

This study found a prevalence of adenomyosis of 21.9% in patients hysterectomized for benign pathologies of the uterus in the General Hospital of Cancun between 2021 and 2023. This figure is within the range reported in the literature, although its comparison is complex due to the variability in diagnostic criteria and the selection of populations studied (3,4). The annual prevalence remained relatively constant in the years 2022 and 2023, with values of 20.7% and 21.2%, respectively. However, in 2021, a prevalence of 50% was observed, although this percentage may be influenced by the small number of cases registered during that year.

The clinical symptoms associated with adenomyosis include abnormal uterine bleeding, dysmenorrhea and chronic pelvic pain, although a considerable percentage of patients may be asymptomatic (5). In our study, no significant differences were identified in the prevalence of adenomyosis according to the benign pathology that motivated the hysterectomy ($p > 0.05$). However, a higher frequency of adenomyosis was observed in patients with endometrial hyperplasia (33.3%) compared to those with uterine myomatosis (22.3%), which could suggest a possible association between both pathologies, as has been proposed in previous studies (6).

About age, the mean age of patients with adenomyosis was 44.64 years, with no significant differences with the group without adenomyosis ($p = 0.48$). These findings are consistent with the literature, which describes a higher frequency of adenomyosis in middle-aged women, particularly between 40 and 50 years of age (7). In addition, several studies have pointed out that adenomyosis can have an impact on fertility, affecting embryo implantation and increasing the risk of obstetric complications, such as postpartum hemorrhage and preeclampsia (8).

Preoperative diagnosis of adenomyosis remains a clinical challenge. Although transvaginal ultrasound and MRI have improved diagnostic accuracy, the gold standard continues to be histopathological analysis after hysterectomy (9,10). In our study, due to the retrospective nature of the design and the lack of information in some clinical records, it was not possible to correlate histopathologic diagnosis with preoperative imaging findings.

Therapeutic options for adenomyosis include medical treatment and surgical procedures. Nonsteroidal anti-inflammatory drugs, hormonal contraceptives and intrauterine devices with levonorgestrel have shown effectiveness in controlling symptoms, while hysterectomy remains the definitive option for patients with severe or refractory symptomatology (11,12). In the present study, all patients underwent hysterectomy, which precluded evaluation of the response to conservative medical treatments.

Among the limitations of this study is the small number of cases registered in 2021, which may have influenced the prevalence estimate for that year. This situation could be attributed to the COVID-19 pandemic, which affected access to medical services and reduced the number of elective surgeries. Also, some clinical records were incomplete and

did not contain all the necessary information, which limited the analysis of certain associated factors.

Despite these limitations, this study provides relevant data on the prevalence of adenomyosis in a specific population of patients hysterectomized for benign pathologies of the uterus. Future studies with a prospective design and the use of preoperative diagnostic tools could improve the characterization of this disease and allow a better identification of the associated risk factors.

CONCLUSION

Adenomyosis is a common gynecologic pathology in women hysterectomized for benign pathologies of the uterus. In this study, the prevalence of adenomyosis was 21.9%, with no significant differences according to the underlying benign pathology or the age of the patients. Although definitive diagnosis remains dependent on histopathologic analysis, these findings highlight the importance of considering adenomyosis in the preoperative evaluation of patients with nonspecific gynecologic symptomatology. Limitations of the study, such as the small number of cases in 2021 and the lack of information in some files, underscore the need for prospective studies with more accurate preoperative diagnostic methods to improve the identification and management of this condition.

ETHICAL CONSIDERATIONS

In this study the identifying information has been removed from all patient-related data and was approved by the Ethics Committee of the General Hospital of Cancun. Since this was a retrospective analysis based on secondary data, anonymization and confidentiality of the information of the patients included in the study was guaranteed.

FINANCING

This research has not received any type of funding from public or commercial sector agencies or for profit

CONFLICT OF INTERESTS

The authors declare no conflict of interest.

ACKNOWLEDGE

Special thanks to the “Facultad de Medicina de la Universidad Autónoma de Yucatán (UADY)”.

REFERENCES

I. Pados, G., Gordts, S., Sorrentino, F., Nisolle, M., Nappi, L., & Daniilidis, A. (2023). Adenomyosis and infertility: A literature review. *Medicina (Kaunas, Lithuania)*, *59*(9). https://doi.org/10.3390/medicina59091551

II. Upson, K., & Missmer, S. A. (2020). Epidemiology of adenomyosis. *Seminars in Reproductive Medicine*, *38*(2–03), 89–107. https://doi.org/10.1055/s-0040-1718920

III. Weiss, N. S., & Koepsell, T. D. (2014). *Epidemiologic methods: Studying the occurrence of illness*. Oxford University Press. https://doi.org/10.1093/med/9780195314465.001.0001

IV. Dason, E. S., Maxim, M., Sanders, A., Papillon-Smith, J., Ng, D., Chan, C., & Sobel, M. (2023). Guideline No. 437: Diagnosis and Management of Adenomyosis. *Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC*, *45*(6), 417–429.e1. https://doi.org/10.1016/j.jogc.2023.04.008

V. Gordts, S., Grimbizis, G., & Campo, R. (2018). Symptoms and classification of uterine adenomyosis, including the place of hysteroscopy in diagnosis. *Fertility and Sterility*, *109*(3), 380-388.e1. https://doi.org/10.1016/j.fertnstert.2018.01.006

VI. Levgur, M., Abadi, M. A., & Tucker, A. (2000). Adenomyosis: symptoms, histology, and pregnancy terminations. *Obstetrics and Gynecology*, *95*(5), 688–691. https://doi.org/10.1016/s0029-7844(99)00659-6

VII. Harada, T., Khine, Y. M., Kaponis, A., Nikellis, T., Decavalas, G., & Taniguchi, F. (2016). The impact of adenomyosis on women’s fertility. *Obstetrical & Gynecological Survey*, *71*(9), 557–568. https://doi.org/10.1097/OGX.0000000000000346

VIII. de Rozario, T., Jochum, F., Schwaab, T., Garbin, O., Roy, C., & Host, A. (2024). Adenomyosis and obstetric complications: A retrospective case-control study. *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, *292*, 120–124. https://doi.org/10.1016/j.ejogrb.2023.11.011

IX. Chapron, C., Vannuccini, S., Santulli, P., Abrão, M. S., Carmona, F., Fraser, I. S., Gordts, S., Guo, S.-W., Just, P.-A., Noël, J.-C., Pistofidis, G., Van den Bosch, T., & Petraglia, F. (2020). Diagnosing adenomyosis: an integrated clinical and imaging approach. *Human Reproduction Update*, *26*(3), 392–411. https://doi.org/10.1093/humupd/dmz049

X. Janicas, C., & Cunha, T. M. (2023). Adenomyosis at a glance: An integrated review of transvaginal ultrasound and MR imaging findings. *Current Problems in Diagnostic Radiology*, *52*(5), 412–417. https://doi.org/10.1067/j.cpradiol.2023.05.007

XI. Moldassarina, R. S. (2023). Modern view on the diagnostics and treatment of adenomyosis. *Archives of Gynecology and Obstetrics*, *308*(1), 171–181. https://doi.org/10.1007/s00404-023-06982-1