International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Parveen M et al. Int J Reprod Contracept Obstet Gynecol. 2025 Feb;14(2):410-414
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20250175

Original Research Article

Hormonal therapy versus hysterectomy in the management of symptomatic adenomyosis

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Received: 16 December 2024
Accepted: 10 January 2025

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ABSTRACT

Background: Adenomyosis is a uterine disorder marked by symptoms such as pelvic pain, abnormal uterine bleeding (AUB), and infertility. The purpose of this study was to assess the effectiveness and patient outcomes of hormonal therapy versus hysterectomy in the management of symptomatic adenomyosis. The aim of this study was to evaluate the effectiveness and patient outcomes of hormonal therapy versus hysterectomy in the management of symptomatic adenomyosis.
Methods: This prospective observational study included 85 patients with symptomatic adenomyosis treated with hormonal therapy (n=45) or hysterectomy (n=40) at Bangabandhu Sheikh Mujib Medical University (BSMMU) from 2022 to 2023. Inclusion criteria were adult females aged 20 years and above, while those with other gynecological disorders or severe comorbidities were excluded. Data on demographic characteristics, symptom relief, and patient satisfaction were analyzed using statistical package for the social sciences (SPSS) version 22.0, employing both descriptive and inferential statistics.
Results: Most patients (n=85) were aged 40-49 years, with 55.6% receiving hormonal therapy. Hormonal therapy was used in 52.9% of cases, slightly surpassing hysterectomy at 47.1%. Treatment outcomes showed that 75.0% of hysterectomy patients experienced complete symptom relief, while only 44.4% in the hormonal therapy group reported the same, and 70.0% of hysterectomy patients were very satisfied compared to 33.3% in the hormonal therapy group. Hysterectomy patients had a shorter hospital stay, with 25.0% discharged within 2-3 days compared to 11.1% of hormonal therapy patients.
Conclusions: Hysterectomy provides superior symptom relief and patient satisfaction compared to hormonal therapy in the management of symptomatic adenomyosis.

Keywords: Adenomyosis, Hormonal therapy, Hysterectomy, Symptomatic management, Patient outcomes

INTRODUCTION

Adenomyosis is a uterine disorder marked by symptoms such as pelvic pain, abnormal uterine bleeding (AUB), and infertility.[1] This condition involves the benign presence of ectopic endometrial glands and stroma, leading to reactive hypertrophy of the smooth muscle fibres in the myometrium.[2,3] Adenomyosis is a common gynecological condition with unclear causes, frequently affecting women of various ages and presenting significant health challenges.[4,5] Symptoms associated with adenomyosis include heavy menstrual periods, dysmenorrhea, and chronic pelvic pain, all of which can significantly impact women's quality of life.[6] Approximately one-third of women with adenomyosis experience symptoms, with around 40%-50% suffering from heavy menstrual bleeding

and 15-30% from dysmenorrhea.[2,7] Furthermore, the condition is characterized by the presence of islets composed of both stromal and epithelial endometrial tissue within the myometrium, complicating both diagnosis and treatment.

Adenomyosis can be managed conservatively using either hormonal or non-hormonal approaches. When conservative treatments prove ineffective, hysterectomy is often the most common surgical solution, as the diffuse nature of adenomyosis makes its surgical removal challenging.[8] Therefore, conservative management that aims to preserve or restore fertility while managing symptoms should be prioritized. Additionally, adenomyosis frequently coexists with other gynecological conditions, such as endometriosis and uterine fibroids, which should be factored into the treatment plan.[9,10] Although limited randomized double-blind clinical studies have specifically investigated medical treatments for adenomyosis, current medical therapies are showing increasing effectiveness for symptom control or fertility treatment.[11] While a complete hysterectomy remains the only definitive treatment, the introduction of imaging diagnostic criteria now allows women to explore nonsurgical alternatives. Hormonal management, such as the use of progestins like the levonorgestrel intrauterine system (LNG-IUS), can help reduce symptoms like menorrhagia and dysmenorrhea.[12,13]

Recent advances in understanding adenomyosis pathogenesis and identifying potential therapeutic targets have emerged from animal and in vitro studies, sparking hope for further clinical research into new treatment approaches for this complex disease. Although treatments like NSAIDs, progestins, oral contraceptives, and GnRH analogues are currently used off-label to manage pain symptoms and abnormal uterine bleeding associated with adenomyosis, there is a pressing need to assess and compare the effectiveness of these different treatment options.[14] While various case series and cohort studies have evaluated uterine artery embolization (UAE) as a treatment for symptomatic adenomyosis, there is still a lack of randomized data comparing this intervention to the gold standard treatment, hysterectomy.[15-17]

The QUESTA trial was designed to fill this gap, but further research is required to better understand the outcomes of various treatment options, particularly in comparison to hysterectomy. Additionally, recent findings indicate that adenomyosis, particularly in premenopausal women and in association with endometriosis, plays a significant role in infertility. This highlights the need to assess treatment outcomes for symptomatic adenomyosis, including comparing hormonal therapy with hysterectomy, to offer patients effective management options for their condition. The purpose of this study was to assess the effectiveness and patient outcomes of hormonal therapy versus hysterectomy in the management of symptomatic adenomyosis.

Objectives

The aim of this study was to evaluate the effectiveness and patient outcomes of hormonal therapy versus hysterectomy in the management of symptomatic adenomyosis.

METHODS

The prospective observational study was conducted at the Department of Obstetrics and Gynecology, Bangabandhu Sheikh Mujib Medical University (BSMMU), from 2022 to 2023. The study involved 85 patients diagnosed with symptomatic adenomyosis who were treated either with hormonal therapy or hysterectomy during this period. Among the 85 patients, 45 received hormonal therapy, while 40 underwent hysterectomy.

Inclusion criteria

Adult females aged 20 years and above, patients diagnosed with symptomatic adenomyosis, and patients who consented to participate in the study were included.

Exclusion criteria

Patients with other gynecological disorders requiring different surgical interventions, patients with pre-existing severe comorbidities that could affect treatment outcomes, and pregnant or lactating women were excluded.

Informed consent was obtained from all participants, ensuring confidentiality and voluntary participation, with baseline evaluations including demographic data, clinical symptoms, and treatment modalities. Post-treatment, symptom relief and patient satisfaction were assessed using structured questionnaires. Additionally, the length of hospital stay for each treatment modality was recorded and analyzed. Data were collected and analyzed using statistical package for the social sciences (SPSS) version 22.0, with descriptive statistics calculated for demographic variables and inferential statistics such as chi-square tests for categorical variables and t-tests for continuous variables—employed to evaluate differences between treatment modalities, considering a p value of <0.05 as statistically significant. The study received ethical approval from the Institutional Review Board (IRB) of BSMMU, ensuring compliance with ethical standards and maintenance of patient confidentiality throughout the research.

RESULTS

The demographic analysis shows that the majority of patients (n=45 for hormonal therapy and n=40 for hysterectomy) are concentrated in the age group of 40-49 years, with 25 (55.6%) receiving hormonal therapy and 20 (50.0%) undergoing hysterectomy. The mean age of patients was 44.3 ± 4.4 years for those receiving hormonal therapy and 46.4±3.8 years for hysterectomy patients. The

age group of 50 years and older shows a significant representation in the hysterectomy group, with 13 patients (32.5%). The parity data indicates that most patients had a median parity of 3.0 (IQR 2.0) in the hormonal therapy group and 3.0 (IQR 5.0) in the hysterectomy group, while the body mass index (BMI) showed a predominance of patients with a BMI within the 18.5-24.9 range (Table 1).

Table 1: Demographic characteristics of the study patients (n=85).

Variables	Hormonal therapy (n=45) (%)	Hysterectomy (n=40) (%)	Total (n=85) (%)	P value
Age (years)				
20-29	5 (11.1)	2 (5.0)	7 (8.2)	0.032
30-39	10 (22.2)	5 (12.5)	15 (17.6)	
40-49	25 (55.6)	20 (50.0)	45 (52.9)	
≥50	5 (11.1)	13 (32.5)	18 (21.2)	
Parity				
0	10 (11.8)	8 (88.2)	18 (21.2)	0.859
1	15 (22.7)	5 (77.3)	20 (23.5)	
>1	20 (30.9)	12 (69.1)	32 (37.6)	
BMI (kg/m²)				
<18.5	5 (11.1)	4 (10.0)	9 (10.6)	0.287
18.5-24.9	25 (55.6)	20 (50.0)	45 (52.9)	
25.0-29.9	10 (22.2)	10 (25.0)	20 (23.5)	
≥30	5 (11.1)	6 (15.0)	11 (12.9)	

Among the 85 participants, hormonal therapy was utilized in 45 cases (52.9%), slightly outnumbering hysterectomy, which was performed in 40 cases (47.1%) (Table 2).

Table 2: Distribution of treatment modalities among participants (n=85).

Treatment modality	Frequency (n)	Percentage (%)
Hormonal therapy	45	52.9
Hysterectomy	40	47.1

The treatment outcome analysis shows significant differences in symptom relief and patient satisfaction between the two modalities. A higher percentage of patients undergoing hysterectomy reported complete relief (75.0%) compared to those receiving hormonal therapy (44.4%), with p-values indicating statistical significance. Patient satisfaction mirrored these findings, with 70.0% of hysterectomy patients feeling very satisfied, compared to only 33.3% in the hormonal therapy group (Table 3).

The majority of patients (58.8%) were hospitalized for 3 to 4 days, with equal numbers in each group (25 patients). Additionally, 17.6% of patients had stays of 1 to 2 days, 16.5% stayed for 5 to 6 days, and 7.1% were hospitalized for more than 7 days, predominantly in the hormonal therapy group (11.1% vs. 2.5% in hysterectomy). This data suggests a trend toward shorter hospital stays for those undergoing hysterectomy (Table 4).

Table 3: Treatment outcomes: symptom relief and patient satisfaction (n=85).

Variables	Hormonal therapy (n=45)	Percentage (%)	Hysterectomy (n=40)	Percentage (%)	P value
Symptom relief					
Complete relief	20	44.40	30	75.00	<0.001
Partial relief	15	33.30	8	20.00	0.012
No relief	10	22.20	2	5.00	0.045
Patient satisfaction					
Very satisfied	15	33.30	28	70.00	<0.001
Satisfied	25	55.60	10	25.00	<0.001
Dissatisfied	5	11.10	2	5.00	0.09

Table 4: Distribution of length of hospital stay by treatment modality.

Length of hospital stay (days)	Hormonal therapy (n=45) (%)	Hysterectomy (n=40) (%)	Total (N=85) (%)
1-2	5 (11.1)	10 (25.0)	15 (17.6)
3-4	25 (55.6)	25 (62.5)	50 (58.8)
5-6	10 (22.2)	4 (10.0)	14 (16.5)

Continued.

Length of hospital stay (days)	Hormonal therapy (n=45) (%)	Hysterectomy (n=40) (%)	Total (N=85) (%)
>7	5 (11.1)	1 (2.5)	6 (7.1)
Total	45 (100)	40 (100)	85 (100)

DISCUSSION

The management of symptomatic adenomyosis remains a significant challenge in gynecology, as evidenced by the varied treatment approaches and their respective outcomes. This study aimed to evaluate the effectiveness of hormonal therapy compared to hysterectomy, providing valuable insights into patient satisfaction and symptom relief. The findings indicate that while hysterectomy offers higher rates of symptom relief and patient satisfaction, hormonal therapy remains a viable option for those seeking to preserve fertility or avoid surgery. Understanding the implications of these results is crucial for informing clinical decision-making and optimizing patient care in managing adenomyosis.

In our study, the demographic analysis revealed that the majority of patients were concentrated in the age group of 40-49 years, with 25 (55.6%) receiving hormonal therapy and 20 (50.0%) undergoing hysterectomy. The mean age of patients was 44.3±4.4 years for those receiving hormonal therapy and 46.4±3.8 years for hysterectomy patients. This aligns with findings from Roy et al, who reported a mean age of 44.3±4.4 years for their patient cohort, further supporting the prevalence of adenomyosis in this age group.[18] Additionally, our parity data showed a median parity of 3.0 (IQR 2.0) for the hormonal therapy group and 3.0 (IQR 5.0) for the hysterectomy group, similar to the results of another study which indicates comparable reproductive histories among patients receiving different treatment modalities.[19] Moreover, we noted a predominance of patients with a BMI within the 18.5-24.9 range, consistent with findings by Matsushima et al, highlighting the importance of BMI as a relevant factor in the demographic characteristics of adenomyosis patients.[20]

In our study, hormonal therapy was utilized in 45 out of 85 participants (52.9%), slightly surpassing the number of hysterectomy cases, which accounted for 40 participants (47.1%). This distribution indicates a notable preference for hormonal management among patients with symptomatic adenomyosis, reflecting a growing trend in clinical practice towards less invasive treatment options. The predominance of hormonal therapy in our study underscores the need for ongoing evaluation of treatment preferences and their impact on patient outcomes.

In our study, we observed significant differences in symptom relief and patient satisfaction between the two treatment modalities. A higher percentage of patients undergoing hysterectomy reported complete symptom relief (75.0%) compared to those receiving hormonal therapy (44.4%), with p values indicating statistical significance. Correspondingly, 70.0% of hysterectomy patients expressed high satisfaction levels, whereas only 33.3% in the hormonal therapy group felt similarly. These findings are consistent with those of Ozdegirmenci et al, who noted a 51.4% rate of amenorrhea at one year in patients undergoing hysterectomy for severe adenomyosis, highlighting the effectiveness of surgical intervention.[21] While 33.3% of patients in the hormonal therapy group achieved partial relief, compared to 20.0% in the hysterectomy group, our results underscore the need to consider hysterectomy as a primary treatment for women with severe adenomyosis due to its significant benefits in symptom management and patient satisfaction.

In our study, the length of hospital stay analysis indicated that the majority of patients (58.8%) were hospitalized for 3 to 4 days, with equal distributions among the hormonal therapy (n=25) and hysterectomy groups (n=25). Additionally, 17.6% of patients had shorter stays of 1 to 2 days, while 16.5% required longer stays of 5 to 6 days. Notably, 7.1% of patients were hospitalized for more than 7 days, with a higher percentage in the hormonal therapy group (11.1%) compared to the hysterectomy group (2.5%). This trend suggests that patients undergoing hysterectomy may experience shorter hospital stays, which aligns with findings from Yavuzcan et al that reported a similar reduction in hospitalization duration following surgical intervention for adenomyosis.[22] Such outcomes highlight the efficiency of hysterectomy as a treatment modality, not only for symptom relief but also in terms of overall hospital resource utilization.

This study underscores the effectiveness of hysterectomy over hormonal therapy, emphasizing its role in achieving better patient outcomes in the management of symptomatic adenomyosis.

Limitations

This study had several limitations. Small sample size may limit the generalizability of the findings. Single-center study might introduce bias in the results. The study's limited geographic scope may introduce sample bias, potentially affecting the broader applicability of the findings.

CONCLUSION

This study demonstrated that hysterectomy offers superior symptom relief and higher patient satisfaction compared to hormonal therapy in managing symptomatic adenomyosis. The results indicate that while both treatment modalities are utilized, hysterectomy leads to a significantly higher rate of complete symptom relief and overall patient satisfaction. These findings suggest that for patients with symptomatic adenomyosis, especially those with severe

symptoms, hysterectomy may be the more effective option for management.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Parveen M, Zabin F, Sultana N, Begum KF, Ara R, Munmun SA, et al. Hormonal therapy versus hysterectomy in the management of symptomatic adenomyosis. Int J Reprod Contracept Obstet Gynecol 2025;14:410-4.