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Indian Journal of Obstetrics and Gynecology Research

Journal homepage: www.ijogr.org

Original Research Article

A retrospective analysis of spectrum of presentation of adenomyosis in tertiary centre

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ARTICLE INFO

Article history:
Received 20-05-2020
Accepted 14-12-2020
Available online 13-03-2021

Keywords:
Adenomyosis
Magnetic resonance imaging (MRI)
Transvaginal scan (TVS)
Menstrual disturbances
Hysterectomy

ABSTRACT

Introduction: Benign invasion of endometrial tissue into the myometrium of uterus is known as adenomyosis. It is found typically between the age of 35-50 years. Prevalence is 6- 39%. Modern imaging techniques, both ultrasound (TAS, TVS) and MRI have made possible, for the first time, a non-invasive identification of adenomyosis.

Aims & Objectives: To analyse the spectrum of presentation of adenomyosis and to determine the accuracy of clinical examination and imaging modalities in the diagnosis.

Materials and Methods: It is a retrospective study done at hospitals attached to Bangalore Medical College & Research Institute during august 2016-august 2017. The HPE reports and case records of all the hysterectomy specimens were reviewed. Data regarding age, parity, symptoms, obstetric history, examination, co morbidities, investigation findings, associated pathology and treatment modality were noted. They were tabulated and analysed.

Results: Out of the 50 patients, 56% were in the age group of 41-50 years. The prevalence of adenomyosis in our study was only 10% in post-menopausal women when compared to the age group 41-50yrs (56%). Multiparous women had 94% incidence of adenomyosis. 26% of women had prior uterine surgeries. 22% of cases had history of infertility in this study. 56% had menstrual disturbances. Dysmenorrhea & Dyspareunia were the next common symptoms. Fibroid was the commonest associated pathology (38%). 34% had hyperplasia of endometrium whereas 66% had no pathology. Imaging picked up only 40% of cases contrary to 36% of clinical diagnosis and was raised to 66% with gross examination of specimen and 100% with HPE.

Conclusion: Adenomyosis has a varied presentation. Ultrasound fails to diagnose all the cases. Clinical examination is a better modality. Associated pathology may mask the clinical features of adenomyosis, and diagnosis may be missed. Presently HPE is probably the gold standard for diagnosing adenomyosis.

1. Introduction

Benign invasion of endometrial tissue into the myometrium of uterus is known as Adenomyosis. It is found typically between the age of 35-50 years.[1] Prevalence is 6- 39%. This wide range is due to the different diagnostic methods used.[2] Microscopically, adenomyosis exhibits ectopic, non-neoplastic, endometrial glands and stroma surrounded by the hypertrophic and hyperplastic myometrium.[3]

Symptoms	Signs
35% of patients are Asymptomatic	P/A- uterus just palpable
30% Dysmenorrhoea	
Menorrhagia	P/V- Halban's sign- (during cycles) - bulky, soft, diffuse boggy and tender
15% Dyspareunia	
15- 20% chronic pelvic pan	

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https://doi.org/10.18231/j.ijogr.2021.015

1.1. Diagnosis

Modern imaging techniques, both ultrasound (TAS, TVS) and MRI have made possible, for the first time, a non-invasive identification of adenomyosis.[4]

TVS—— Sensitivity—65-68%	Specificity- 65-98%
MRI——- Sensitivity—70-78%	Specificity- 86 -93%

2. Aims and Objectives

1. To analyse the spectrum of presentation of adenomyosis.
2. To determine the accuracy of clinical examination and imaging modalities in the diagnosis.

3. Material and Methods

1. It is a retrospective study done at hospitals attached to Bangalore Medical College & Research Institute during august 2016-august 2017.
2. The HPE reports of all the hysterectomy specimens were reviewed and was found that 50 cases showed evidence of adenomyosis.
3. Case records were reviewed.
4. Data regarding age, parity, symptoms, obstetric history, examination, co morbidities, investigation findings, associated pathology and treatment modality were noted.
5. They were tabulated and analysed with chi square test.

Table 1: Specimen retrieval from

TAH	16 (32%)
TAH + BSO	25 (50%)
VH	1 (2%)
TAH + RSO	3 (6%)
NDVH	4 (8%)
TAH + LSO	1 (2%)

90% of the cases underwent abdominal hysterectomy. 2% underwent vaginal hysterectomy and 2% NDVH.

4. Results

Table 2: Age distribution

<30	NIL
30-40	14 cases (28%)
41-50	28 cases (56%)
>50	4 cases (8%)
Postmenopausal	4 cases (8%)

Majority of patients were in 40-50 years of age. 28 cases were in the age group of 30-40 years.

4 patients were postmenopausal. 4 patients were more than 50yrs of age. None were less than 30years.

Table 3: Parity

Multiparous	47 cases (94%)
Nulligravida	2 cases (4%)
Nulliparous	1 case (2%)

94% were multigravida while 4% were nulligravida. The least incidence was in nullipara with 2%.

Table 4: Weight

40-60kg	43 cases (86%)
>60kg	7 cases (14%)

Majority of the cases were between 40- 60kgs. 7 patients are of weight more than 60kg.

4.1. Presenting symptoms

There was varied presentation of complaints with menstrual disturbances being the most common.

Table 5: Menstrual disturbances

Heavy menstrual bleeding	5 cases (10%)
Increased frequency of cycles	10cases (20%)
Intermenstural bleeding	3 cases (6%)
Continuous bleeding PV	4 cases (8%)
Decreased frequency with menorrhagia	3 cases (6%)
Post menopausal bleeding	1 case (2%)
Amenorrhoea f/b menorrhagia	2 cases (4%)
Post coital bleeding	1 case (2%)
Spotting PV	1 case (2%)

Table 6: Pain

Congestive dysmenorrhea	3 (6%)
Spasmodic dysmenorrhea	4 (8%)
Continuous pain	6 (12%)
Dyspareunia	4 (8%)

Table 7: Others

Retention of urine	1 (2%)
Incomplete voiding of urine	1 (2%)
Mass per vaginal	2 (4%)
Abdominal distension	1 (2%)

Among the menstrual complaints, increasing frequency of menstrual cycles was the most common followed by heavy menstrual bleeding.

Pain was another complaint which affected the lifestyle of patients. Most of the patients complained of continuous

pain. The second most common type was dyspareunia and spasmodic dysmenorrhea.

1. History of infertility was present in 11 cases out of 50 cases (22%).
2. Age of menarche- majority of patients had menarche after 12 years with no evidence of prolonged oestrogen stimulation.
3. Most of them presented within 6 months of duration of illness- 58%.
4. Previous history of dilatation & curettage present in 13 cases out of 50 cases (26%).
5. History of previous operative procedures.
   a. 6% had undergone procedures like cystectomy & myomectomy.
   b. 68% had undergone tubectomy.
   c. 30% had undergone section.

Table 8:

Ovarian cystectomy	1 (2%)
Diagnostic lap	1 (2%)
Myomectomy	1 (2%)
Normal delivery	32 (64%)
Previous 1 section	8 (16%)
Previous 2 section	7 (14%)
Tubectomy	LTO- 16 (32%) BAT-18 (36%) 16 (32%) cases- non tubectomised

Table 9: Duration of symptoms

<3 months	14 (28%)
3-6 months	15 (30%)
7m-1yr	7 (14%)
1yr-2yr	11 (22%)
>2yr	3 (6%)

14 patients had recent history of onset of symptoms from 3 months. Maximum patients had symptoms from one year. Very few of them had from 2 years.

Table 10: Pathological examination of specimens

Endometrium	
Secretory	13 (26%)
Proliferative	20 (40%)
Hyperplastic	17 (34%)

The most common type of endometrial histopathology was proliferative followed by hyperplastic. This indicates the role of oestrogen in the pathophysiology of adenomyosis.

4.2. Other associated pathology

Most of the endometrial reports were normal. 13 patients had simple cystic hyperplasia without atypia.

Table 11: Endometrium

Simple cystic hyperplasia without atypia	13 (26%)
Secretory phase of endometrium	11 (22%)
Proliferative phase of endometrium	13 (26%)
Polypoidal endometrium	3 (6%)
Senile cystic atrophy	3 (6%)
Non secretory endometrium	2 (4%)
Basal endometrium with superficial adenomyosis	4 (8%)
Shedding endometrium	1 (2%)

Table 12: Myometrium

Adenomyosis + TO mass	1 (2%)
Adenomyosis + fibroid + ovarian cyst	3 (6%)
Adenomyosis + fibroid	12 (24%)
Adenomyosis + fibroid + polyp	3 (6%)
Adenomyosis	21 (42%)
Adenomyosis + ovarian cyst	5 (10%)
Adenomyosis + polyp	5 (10%)

Majority patients had other associated pathology along with adenomyosis like fibroid, polyp, ovarian cyst. 21 patients were found to have only adenomyosis.

Table 13: Cervix

Cervicle fibroid	1(2%)
Cervical polyp	1(2%)

Table 14: Clinical diagnosis based on history and examination findings

Adenomyosis	18(36%)
PID	8(16%)
Fibroid	17(34%)
AUB(o)	6(12%)
CA endometrium	1(2%)

In 36% of cases, clinical diagnosis of adenomyosis was made. In the rest, the co- existing pathology was adenomyosis, but primary pathology was as mentioned above.

Table 15: Ultrasound imaging

Ut normal size	3(6%)
Ut normal with ovarian cyst	6(12%)
Ut bulky	6(12%)
Fibroid	13(26%)
Fibroid + adenomyosis	5 (10%)
Adenomyosis	14(28%)
CA endometrium	1(2%)
Fibroid + ovarian cyst	1(2%)
Fibroid + ovarian cyst + adenomyosis	1(2%)

1. 28% were reported as normal uterus

2. Adenomyosis was picked up in 40% of cases and in the rest Adenomyosis was not reported

Table 16: Diagnosis of adenomyosis

Clinically	18(36%)
USG	20(40%)
Gross	33(66%)
HPE	50(100%)

The most reliable method of diagnosis of adenomyosis was by histopathological examination of the specimen while clinical diagnosis has the least sensitivity of diagnosis of adenomyosis.

5. Discussion

Out of the 50 patients, 56% were in the age group of 41-50 years, which is the usual age of occurrence as similarly found in Bird et al. study.[5] The prevalence of adenomyosis in our study was only 10% in post-menopausal women when compared to the age group 41-50yrs (56%). This indicates adenomyosis regresses after menopause but remains detectable. Kitawaki et al., conducted a similar study showing diagnosis of adenomyosis in post-menopausal women.[6] In our study, multiparous women had 94% incidence of adenomyosis in correlation with high incidence in Wallwiener et al. study.[7] Harmanli O H et al., study stated that prior uterine surgeries could be a risk factor for adenomyosis. In our study only 26% women had this history.[8] There is no evidence of adenomyosis directly causing infertility. 22% of cases had history of infertility in this study. Chapron et al., also showed less correlation.[9] Symptom wise, 56% had menstrual disturbances which were also seen in Vercellin e al., study.[10] Dysmenorrhea & Dyspareunia were the next common symptoms. Fibroid was the commonest associated pathology (38%). Vercillin et al., study also had the same pathology as commonest.[11] 34% had hyperplasia of endometrium whereas 66% had no pathology. Similar results were seen in Cullen et al., study[12] showing that no hyperplasia was present as there was absence of prolonged oestrogen exposure.

Imaging picked up only 40% of cases contrary to 36% of clinical diagnosis and was raised to 66% with gross examination of specimen and 100% with HPE. This shows that a good gynaecologist may suspect adenomyosis on clinical basis, stated Aziz et al., as he found similar outcome in his study.[2]

6. Conclusion

Adenomyosis has a varied presentation. Ultrasound fails to diagnose all the cases. Clinical examination is a better modality. Associated pathology may mask the clinical features of adenomyosis, and diagnosis may be missed. Presently HPE is probably the gold standard for diagnosing adenomyosis.

7. Prospects

A prospective study needs to be conducted. Pre op myometrial biopsy may be an option in the diagnosis. Other imaging modalities like MRI need to be evaluated. Hysterectomy audit to be done. Severity of adenomyosis could be related to the symptom complex.

8. Source of Funding

None.

9. Conflict of Interest

The authors declare that there is no conflict of interest.

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Cite this article: Rashmi K, Radhika, Anitha G S, Sukanya S, Savitha C. A retrospective analysis of spectrum of presentation of adenomyosis in tertiary centre. *Indian J Obstet Gynecol Res* 2021;8(1):77-81.