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Original Research Article

Prevalence of adenomyosis and associated gynaecological pathologies in hysterectomy samples: a retrospective study

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ABSTRACT

Background: Adenomyosis is a prevalent gynaecological disorder among women and it is a major cause for AUB. Its diagnosis is confirmed by histological examination of hysterectomized samples. Moreover it is associated with other benign gynaecological pathologies. The aim of this study is to identify the prevalence of Adenomyosis and its association with other benign gynaec pathologies in hysterectomized samples.
Methods: This retrospective of two year duration was conducted in obstetrics and Gynaecology department of Malabar Medical College Hospital and Research Centre, a tertiary care centre in Kozhikode, Kerala from 2019 June to 2021 June. 452 patients underwent hysterectomy for abnormal uterine bleeding during this period. Among this, 76 patients had histologically proven adenomyosis in hysterectomy specimen and their case record were reviewed and the data was analysed.
Results: The prevalence of Adenomyosis in this study was 16.8%. Majority of women were in age group of 41 to 46 (36.8%), followed by 46 to 50 age group (26.3%). 94 % of women were multipara with majority in para2 and para3 group. Only 6 % of women were nulliparous. Most common symptom was abnormal uterine bleeding (92%), followed by dysmenorrhoea and chronic pelvic pain. Majority had overlap of symptoms. 7% of women were asymptomatic. In 60 % of women no other gynaec pathologies were identified. Most common associated pathology was leiomyoma (15.8%), closely followed by endometriosis (13.2%). Endometrial hyperplasia was associated with adenomyosis in 3.9%of women and endometrial polyp in 2.6%. Ovarian pathologies identified were simple ovarian cyst (2.6%) and serous cystadenoma (1.3%).
Conclusions: In the present study, the prevalence of adenomyosis was high and abnormal uterine bleeding was the patients' most prevalent complaint. Among the associated gynaec pathologies, leiomyoma had the highest correlation with adenomyosis.

Keywords: Adenomyosis, AUB, Hysterectomy, HPE

INTRODUCTION

Adenomyosis is a benign uterine disorder in which endometrial glands and stroma are pathologically demonstrated in the myometrium.[1] First described in 1860 by the German pathologist Carl von Rokitansky, the histopathological finding was termed "cystosarcoma adenoids uterinum."[2] Women affected by adenomyosis may present with abnormal uterine bleeding (AUB), dysmenorrhea, dyspareunia, or infertility but one third of them are asymptomatic.[3] Moreover, adenomyosis, endometriosis and leiomyoma commonly coexist in the

same uterus, and differentiating the symptoms for each pathological process can be problematic.[4] Until the last decade adenomyosis was considered a surgical diagnosis made at the time of hysterectomy. But increasingly pelvic ultrasound (TVS) has made diagnosis of adenomyosis more definite. With the advent of Magnetic resonance imaging (MRI) the diagnosis has been more accurate.[5,6] The definitive treatment for women who no longer desire pregnancy is hysterectomy, while a variety of other medical and minimally invasive therapies are available for those who want to preserve fertility or want to avoid more extensive surgery. Adenomyosis is increasingly identified in young women with pain, AUB, infertility, or no symptoms by using imaging techniques such as transvaginal ultrasound and magnetic resonance. However, there is no agreement on the definition and classification of adenomyotic lesions from both the histopathology and the imaging point of view, and the diagnosis remains difficult and unclear.[7] In fact, adenomyosis pathogenesis remains elusive and not a single theory can explain all of the different phenotypes of the disease. Accurate demographics and disease prevalence are unclear due to previous underreporting and under-diagnosis. The percentage of hysterectomy specimens which contain adenomyosis varies from 5–70%. This wide variation may be partly explained by the histological criteria which is used and/or by the number of tissue blocks which are examined. The specificity of the pre-operative diagnosis which is based on the clinical picture is poor, ranging from 2.6–26%.[8] Despite considerable public health burden, associated costs of care, and impacts on the lives of many women, reliable population-based incidence estimates of adenomyosis do not exist and studies on prevalence vary widely.[9] The main aim was to assess the burden and frequency of adenomyosis among hysterectomy specimens for benign causes of AUB and its association with other gynaecological pathologies in Malabar Medical College, Calicut- a tertiary care centre in Calicut, Kerala, India.

METHODS

This retrospective study of two-year duration was conducted in obstetrics and Gynaecology department of Malabar Medical College Hospital and Research Centre, a tertiary care centre in Kozhikode, Kerala from 2019 June to 2021 June. 452 patients underwent hysterectomy for AUB during this period and their histopathological records were analysed. In this 76 patients had histologically proven adenomyosis. They were included for our study (inclusion criteria) and their case records were reviewed for information regarding age, parity, presenting complaints, clinical diagnosis, Investigation findings and associated uterine and adnexal pathologies. The correlation of adenomyosis with these variables were evaluated. Patients with incomplete medical records were excluded (exclusion criteria). Microsoft excel was used for the calculation of results. The study was approved by the Institutional Ethics Committee (IEC).

RESULTS

Of the 452 patients, 76 patients had histologically proven adenomyosis in hysterectomy specimen with a prevalence of 16.8%.

Table 1: Age distribution.

Age	Number	Percentage
35 -40	16	21
41-45	28	36.8
46-50	20	26.3
51-55	12	15.8

Table 2: Parity distribution.

Parity	Number	Percentage
0	4	5
1	6	7.8
2	22	28.9
3	26	34
4	18	23.7

Table 3: Clinical symptoms.

Clinical symptoms	Number	Percentage
Abnormal Uterine bleeding	70	92
Dysmenorrhoea	64	84
Chronic pelvic pain	48	63
Asymptomatic	6	7

Table 4: Gyanec pathologies in specimens with adenomyosis.

Pathology	Number	Percentage
Adenomyosis alone	46	60
Adenomyosis+Leiomyoma	12	15.8
Adenomyosis +endometriosis	10	13.2
Adenomyosis+endometrial polyp	2	2.6
Adenomyosis+endometrial hyperplasia	3	3.9
Adenomyosis +simple ovarian cyst	2	2.6
Adenomyosis +serous cystadenoma	1	1.3

According to table 1, the patients range from 35 to 55 years with maximum age group in 41 to 46 (36.8%), followed by 46 to 50 age group (26.3%).

A total 94% of women were multipara with majority in para2 and para3 group. Only 6% of women were nulliparous (Table 2).

The patients' most common clinical symptoms were examined and classified in Table 3. Most common symptom was abnormal uterine bleeding (92%), followed by dysmenorrhoea and chronic pelvic pain. Majority had overlap of symptoms. 7% of women were asymptomatic.

Association of gynaec pathologies with adenomyosis was evaluated. In 60 % of women no other gynaec pathologies were identified. Most common associated pathology was leiomyoma (15.8%), closely followed by endometriosis (13.2%). Endometrial pathologies were also identified. Endometrial hyperplasia was associated with adenomyosis in 3.9%of women and endometrial polyp in 2.6%. Ovarian pathologies identified were simple ovarian cyst (2.6%) and serous cystadenoma (1.3%).

DISCUSSION

Adenomyosis is one of the most common causes of abnormal uterine bleeding. A classification system developed by FIGO menstrual disorders for AUB known as (PALM-COEIN) stands for polyps, adenomyosis, leiomyomas, malignancy and hyperplasia. COEIN stands for Coagulopathy, Ovulatory dysfunction, endometrial, iatrogenic and not yet specified.

In our retrospective study during the period of 2019 June to 2021 June, 16.8 percentage of patient had adenomyosis proved in hysterectomy specimens, which was done for AUB. The percentage of hysterectomy specimens which contain adenomyosis varies from 5–70%.[10] Yenril et al performed a study on 298 hysterectomized samples over 18 months, of which 103 samples had adenomyosis, with a prevalence rate of 36.2%.[11] The prevalence of adenomyosis reported depends upon the study population, clinical diagnosis, the method used for diagnosis - USG, MRI, and histopathological assessment. Patients who were managed medically and conservatively were not included in our study. When this fails, then only they will opt for hysterectomy.

Majority of the cases in present study were between the age group of 41-50 years (63%). Similar findings were noted in study by Shivananjiah et al and Ali et al with 50% and 73.7% cases respectively in 41-50 years age group.[12,13] In the present study most of the women were multiparous (70.7%) and this is consistent with other studies. In a study which was done by Krista, 96% of the patients with adenomyosis had a parity of more than 3.[14]

Abnormal uterine bleeding, dysmenorrhea, and chronic pelvic pain are the patients' three most common symptoms in present study. Abnormal uterine bleeding was the most common symptom seen in 92%, closely followed by dysmenorrhoea in 84% of cases. Chronic pelvic pain was also seen in 63% of patients and only 7% were asymptomatic. According to Graziano et al Adenomyosis can present with nonspecific symptoms like abnormal vaginal bleeding, dysmenorrhea, chronic pelvic pain, dyspareunia and infertility, while a third of the women are asymptomatic.[15]

Common benign gynaec pathologies associated with adenomyosis in our study were leiomyoma (15.8%) and endometriosis (13.2%). Previous studies have reported the existence of leiomyoma with adenomyosis in 19-57% cases.[16] In a postoperative follow-up study carried out by Templeman et al on 961 patients diagnosed with adenomyosis, 311 patients simultaneously had leiomyoma (32.4%).[17] Co existence of endometriosis is broadly similar to previous reports of 10% in the general population, and less than reported figures of 30% to 87% in women presenting with chronic pelvic pain.[18] Endometrial pathologies like endometrial polyp and endometrial hyperplasia were seen less frequently with a percentage of 2.6 and 3.9 respectively. Adenomyosis has been linked to lesions associated with hyper estrogenic state like endometrial polyp, endometrial hyperplasia and endometrial carcinoma.[19] In present study none of the cases showed endometrial carcinoma. Associated ovarian pathologies seen were simple ovarian cyst (2.6%) and serous cystadenoma (1.3%). Various studies performed on the relation adenomyotic foci and ovarian cysts, failed to demonstrate correlation with ER positivity of adenomyotic foci with ovarian cyst. For example, in a case-series, 21.4% of hysterectomies with adenomyosis were associated with ovarian cysts, but were not correlated with ER status of adenomyotic foci.[20]

The limitation of this study is patients who were managed medically for adenomyosis and those unwilling for surgery were not included.

CONCLUSION

Adenomyosis is a common condition, usually affecting multiparous women over the age of forty and it is a major cause for AUB. The associated histopathological findings vary from leiomyoma, Endometriosis, endometrial hyperplasia and endometrial polyps. Leiomyoma, among the benign endometrial pathologies, had the highest correlation with adenomyosis. A transvaginal pelvic sonogram is the first line investigation for the diagnosis of adenomyosis and MRI is the second line investigation to carry out, and it is ideal when there is any doubt over diagnosis and in terms of looking for any of the pathologies associated with adenomyosis, but the main stay of confirmation of diagnosis lies with the histopathological examination.

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