

Histopathological pattern of endometrium in Adenomyosis

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Abstract

Objective: To study the histopathological pattern of endometrium and associated pathological conditions in patients who had abnormal uterine bleeding due to adenomyosis.

Material and Methods: This was a study done at M.S. Ramaiah medical college and teaching hospital, Bangalore on 44 patients who underwent hysterectomy due to Abnormal uterine bleeding with adenomyosis from Dec 2013 to Dec 2015. All the quantitative variables were expressed as mean and qualitative variables as percentages.

Results: The age of the patients who had adenomyosis ranged from 34 to 65 years, majority (50%) were in the age group of 41-50 years. The commonest histopathological pattern found was proliferative endometrium (n=26, 59.09%).

Conclusion: Adenomyosis contributes to a large proportion of patients who present with abnormal uterine bleeding. The associated histopathology varies from proliferative endometrium to endometrial hyperplasia. Estrogen may be a risk factor as it is associated with fibroid and endometrial hyperplasia.

Keywords: Adenomyosis, Endometrium, Abnormal uterine bleeding

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Introduction

Adenomyosis may be defined as the benign invasion of endometrium into the myometrium, producing a diffusely enlarged uterus which microscopically exhibits ectopic non-neoplastic, endometrial glands and stroma surrounded by the hypertrophic and hyperplastic myometrium.¹ It is one of the major causes of abnormal uterine bleeding (AUB). Although various methods such as ultrasound scan and magnetic resonance imaging have shown high levels of accuracy for the noninvasive diagnosis of adenomyosis, hysterectomy and microscopic evaluation of the samples are still the only ways of definite diagnosis of adenomyosis.² Both adenomyosis and leiomyomas commonly coexist: concomitant adenomyosis in hysterectomy specimens of women with fibroid ranges from 15- 57%.³ Coexisting pathologies such as leiomyomata, endometriosis, endometrial hyperplasia,

endometrial polyp, and endometrial carcinoma are commonly seen with adenomyosis.⁴ This study was hence done to find out the histopathology of the endometrium and the associated pathologies with adenomyosis in patients with abnormal uterine bleeding.

Material and Methods

The present study was conducted in department of Obstetrics and Gynecology, M.S. Ramaiah medical college and Teaching Hospital, Bangalore, during the period of Dec 2013 to Dec 2015. The study involved histopathological analysis of the hysterectomy specimens obtained from patients with adenomyosis presenting with AUB. The demographic data and the clinical symptoms of the patients were analyzed. Statistical Analysis: All the quantitative variables were expressed as mean and qualitative variables as percentages.

Results

A total of 44 hysterectomy specimens with adenomyosis obtained from patients with AUB were studied. Patients' age ranged from 34 to 65 years and most of them were seen in the age group of 41-50 years (n=22, 50%), followed by 31-40 years (n=12, 27.27%) [Table 1].

Table 1: Distribution of the patients according to the age

Age of the patients	Number of patients	Percentage
31-40 years	12	27.27%
41-50 years	22	50%
>51 years	10	22.7%

Parity of the patients ranged from nulliparity to para 5 and majority were para 2 (n=21, 47.72%). Abdominal examination revealed in majority of the patients bulky uterus (n=31, 70.45%) and in 27.27% (n=12) the uterus was 12-14 weeks in size.

Table 2: Shows the associated endometrial histopathology and other pathological conditions associated with adenomyosis

Sl no.	Endometrial histopathology and other associated pathological conditions	Number of patients	Percentage
1.	Proliferative endometrium	26	59.09%
2.	Secretory endometrium	12	27.27%
3.	Leiomyoma	9	20.45%
4.	Endometrial hyperplasia	3	6.81%
5.	Senile cystic atrophy	3	6.81%
6.	Endometrial polyp	4	9.09%

Among the endometrial pathologies associated with adenomyosis, the commonest one was proliferative endometrium (n=26, 59.09%), secretory endometrium (n=12, 27.27%), leiomyoma (n=9, 20.45%), endometrial hyperplasia (n=3, 6.81%), senile cystic atrophy (n=3, 6.81%) and endometrial polyp (n=4, 9.09%). 6 patients had leiomyoma and proliferative endometrium, 2 had secretory endometrium with leiomyoma, 1 had endometrial polyp with proliferative endometrium and 2 had endometrial polyp with secretory endometrium.

Discussion

Adenomyosis is one of the causes for AUB. An International expert consensus from the FIGO Menstrual Disorders Working Group has proposed a standardized classification system (PALM-COEIN) for AUB to facilitate greater appreciation of the complexities of this clinical entity.⁵ PALM stands for Polyps, Adenomyosis, Leiomyomas and Malignancy and hyperplasia. COEIN stands for Coagulopathy, Ovulatory dysfunction, Endometrial, Iatrogenic and Not yet specified.⁵ Out of the 44 patients who underwent hysterectomy due to adenomyosis, majority of the patients were in the age group 41-50 years (50%) followed by 31-40 years age group (n=12, 27.27%). This is in comparison to the study by Anwar Ali in which 73.7% of the patients were found to be between 41-50 years of age, 16.3% were between 31-40 years of age, 1.6% were between 21-30 years of age and 8.1% were of >50 years of age.⁶ In the present study majority of the patients were para 2 (n=21, 47.72%) which is similar to the study by Bupathy A et al in which majority of the patients had parity of 2 and 3.⁷ Pregnancy might facilitate the formation of adenomyosis by allowing adenomyotic foci to be included in the myometrium due to the invasive nature of the trophoblast on the extension of the myometrial fibers.⁸ In other studies, parity, previous spontaneous abortions, dilatation and curettage for gynaecological indications, age between 40 and 59 years, and

endometrial hyperplasia have been positively statistically associated with adenomyosis.⁹ In the present study, among the endometrial pathologies associated with adenomyosis, the commonest one was proliferative endometrium (n=26, 59.09%), secretory endometrium (n=12, 27.27%), leiomyoma (n=9, 20.45%), endometrial hyperplasia (n=3, 6.81%), senile cystic atrophy (n=3, 6.81%) and endometrial polyp (n=4, 9.09%). This is similar to study by Dayal S et al. in which proliferative phase endometrium was accounting for 44.47% and secretory phase was accounting for 25.21%.⁴ The reported incidence of concurrent fibroids has ranged from 19%–57%.¹⁰ In the present study the association of adenomyosis with fibroids were seen in 9 patients (20.45%). Study by Parazzini et al. found the significant association between adenomyosis and endometrial hyperplasia¹¹ while in our study only 3 patients (6.81%) had endometrial hyperplasia. In the study by Dayal S et al hyperplastic endometrial polyp was found in 7.40% while in our study endometrial polyp was found in 9.09% of the patients.⁴

Conclusion

Adenomyosis contributes to a large proportion of patients who present with abnormal uterine bleeding. The associated histopathology varies from proliferative endometrium to endometrial hyperplasia. Estrogen may be a risk factor as it is associated with fibroid and endometrial hyperplasia.

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