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SIGNIFICANCE OF GRADING OF ADENOMYOSIS IN HYSTERECTOMY SPECIMENS- A TWO YEAR STUDY

Pathology

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ABSTRACT

Background:
Adenomyosis is occasionally diagnosed before hysterectomy but it is a common pathologic finding which is related to reproductive and menstrual features. Most frequent cause of adenomyosis is abnormal uterine bleeding.

Aims: 1. To determine the prevalence of adenomyosis in hysterectomy specimens.
2. To know the frequency of distribution and correlate with clinical diagnosis.
3. To correlate the histopathological grading and degree of involvement with the symptoms.

Materials and methods: It was a retrospective study carried out on hysterectomy specimens in our institute from August 2014 to September 2016. Morphological findings were recorded and the number of cases diagnosed to have adenomyosis and adenomyosis associated co-existing pathologies were noted.

Results: Out of 1180 hysterectomy specimens 252 had adenomyosis during the study period. Majority were in the age group of 41-50 years and was common in multiparous women. Menorrhagia, dysmenorrhoea and chronic pelvic pain were the common symptoms. Leiomyomas was the common associated co-morbid condition. Grade and degree of involvement of adenomyosis were proportional to menstrual disturbances.

Conclusion: Adenomyosis is a common non neoplastic pathological condition related to menstrual and reproductive characteristics of the patient.

KEYWORDS:

Adenomyosis, Menorrhagia, Multiparity, Histopathological grading

Introduction

Adenomyosis is a common benign condition which is characterized by invasion of myometrium by the endometrial glands and stroma. Presence of this aberrant endometrium causes reactive hypertrophy and hyperplasia of surrounding myometrium, resulting in enlarged and bulky uterus.[1] Adenomyosis can be asymptomatic, incidental pathological finding on microscopy and extensive involvement of myometrium causes symptoms like abnormal uterine bleeding, dysmenorrhoea and chronic pelvic pain.[2] The exact prevalence of adenomyosis in the population is still unknown . The occurrence of adenomyosis increases with age and parity. A majority of cases are reported in women who are 35-50 years of age and the frequency decreases with menopause.[3] Adenomyosis can also be associated with other pathologies like fibroid, endometrial hyperplasia, endometrial polyp, chronic cervicitis and prolapse. The etiology is poorly understood but different theories have been proposed for the development of adenomyosis like hereditary factors and increased intrauterine pressure.[4]

Adenomyosis is a neglected entity. In spite of many studies adenomyosis is infrequently diagnosed and its symptomatology is not clearly understood. The diagnosis of adenomyosis pre-operatively based on clinical findings is poor and it is diagnosed on histopathological examination after hysterectomy. The purpose of the study was to determine the prevalence and frequency of adenomyosis in hysterectomy specimens and to correlate the symptoms of adenomyosis with histopathological grading and degree of involvement and look for co-existing pathologies.

Materials and Methods

The study was a hospital based cross sectional study for a period of 2 years conducted in tertiary care hospital. Sample consists of both pre and post menopausal women who had undergone abdominal, vaginal or laparoscopic hysterectomy with or without salpingo-oophorectomy and histopathologically diagnosed to have adenomyosis due to various causes. Case records of the patients were reviewed and clinical data such as age, gravida, parity, menstrual history, any previous surgery , symptoms, clinical diagnosis were noted. The histopathology slides of these cases were retrieved and analysed for the prevalence and frequency of adenomyosis. Grading of adenomyosis was done by using Moliter's criteria based on the depth of penetration and is as follows : [5]

Grade I - Penetration of ectopic endometrium into inner third of the myometrium
Grade II - Penetration of ectopic endometrium into middle third of the myometrium
Grade III- Penetration of ectopic endometrium into the inner third of myometrium

Degree of involvement was done by counting the number of ectopic glands per low power field using Bird et al criteria.[5]

Mild - 1 to 3 glands/L.P.F
Moderate - 4 to 9 glands/ L.P.F
Severe - 10 or more glands/L.P.F

These grading and degree of involvement of adenomyosis were correlated with the clinical symptoms. Adenomyosis with co-existing pathologies were also analysed.

Results

A total of 1180 women underwent hysterectomy during the study period. Out of which 252 cases showed adenomyosis.

Table-1: Age wise distribution of patients with adenomyosis

Age	No	%
20-30	7	2.7
31-40	95	37.6
41-50	122	48.4
51-60	25	9.9
>60	3	1.1

Severe - 10 or more glands/L.P.F

These grading and degree of involvement of adenomyosis were correlated with the clinical symptoms. Adenomyosis with co-existing pathologies were also analysed.

Table-2: Distribution of adenomyosis with parity

Parity	No	%
1	10	3.9
2	85	33.7
3	120	47.6
4	24	9.5
5	13	5.1

Table-3: Distribution of symptoms with adenomyosis

Symptoms	No	%
Menorrhagia	88	38.8
Dysmenorrhoea	67	26.5
Chronic pelvic pain	50	21.8
Dyspareunia	18	7.9
Post menopausal bleeding	12	4.7
Mass descending per vagina	17	6.7

Table- 4: Clinical diagnosis in adenomyosis

Diagnosis	No	%
Abnormal uterine bleeding	102	40.4
Fibroid	65	25.7
Adenomyosis	40	15.8
Post menopausal bleeding	12	4.7
Pelvic inflammatory disease	8	3.1
Prolapse	22	8.7
Ovarian cyst	3	1.1

Table -5: Adenomyosis with co existing pathologies.

Co-existing pathology	No	%
Leiomyoma	112	44.4
Endometrial hyperplasia	18	7.1
Endometrial polyp	10	3.9
Serous cyst adenoma	6	2.3
Mucinous cyst adenoma	7	2.7
Chronic cervicitis	95	37.6
CIN II	4	1.5

Table -6: Clinico pathological correlation of the patients menstrual disturbances with the grade of the adenomyosis.

Menstrual disturbances	No	Grade I	Grade II	Grade III
Mennorhagia	88	20	33	35
Dysmennorhea	67	7	28	32
Chronic pelvic pain	50	6	15	29
Dyspareunia	18	10	5	3
Post menopausal bleeding	12	9	1	2
Mass descending per vagina	17	15	1	1

Table 7: Clinicopathological correlation of patients menstrual disturbances with degree of involvement by adenomyosis

Menstrual disturbances	No	Mild	Moderate	Severe
Mennorhagia	88	13	35	40
Dysmennorhea	67	2	20	45
Chronic pelvic pain	50	4	18	28
Dyspareunia	18	11	4	3
Post menopausal bleeding	12	10	1	1
Mass descending per vagina	17	12	3	2

Of the 252 cases 50% were in the age group of 41-50 years, 39% were in the age group of 31-40years and 10% were in the age group of 51-60 years. As the age increased prevalence of adenomyosis decreased (Table/Fig - 1). Majority of them were seen in multiparous women (Table/Fig-2). The most common symptom associated was menorrhagia, followed by dysmenorrhoea, chronic pelvic pain and only 2% presented with mass per abdomen (Table/Fig -3). The pre operative clinical diagnosis of Abnormal uterine bleeding was made in 40.4% followed by Fibroid 25.7% and only in 15.8% diagnosis of adenomyosis was made (Table/Fig- 4). Leiomyoma was the common co-morbid condition with adenomyosis followed by chronic cervicitis (Table/Fig-5). Grade II and Grade III had severe menstrual disturbances (Table/Fig-6). Moderate and severe degree of involvement by adenomyosis patients had dysmenorrhoea as the major symptom (Table/Fig-7).

Discussion

Adenomyosis was first described as Cystosarcoma adenosis uterium by Rokitansky in 1860 6. Later in 1869 Von Recklinghasan described as Adenomyomata and cystadenomata of uterine wall [6]. The current definition was given by Bird et al in 1972 which defines adenomyosis as benign invasion of the endometrial glands and stroma into myometrium. [7] The exact etiology and pathogenesis of adenomyosis is not known. There are number of theories which have been hypothesized. Among these the current concept is the down growth and invagination of basalis layer of endometrium into myometrium. Another concept is lack of basement membrane or presence of defect in the membrane at endometrium- myometrial interface which allows endometrium to grown into the myometrium.[7]

The true prevalence is still unknown. The frequency of adenomyosis reported in the English literature is 5-70%. [3,8] In our study it is reported to be 22% which was in accordance to other studies.[3,8,9]

In our study 86% were found to be between 31-50 years of age. Similar prevalence was found in the study done by Siddegowda which was 89.4%. The reason for adenomyosis for women aged between 35-50yrs is due to presence of excess oestrogen during this period which causes uterine hyperperistalisis. After 50 years women will attain menopause and oestrogen secretion decreases. [7] Yamamoto et al has proved that the cause for adenomyosis development is high oestrogen.[10]

In Khreisat's study 70.5% had menorrhagia, 64.71% had dysmenorrhoea, 62.75% had chronic pelvic pain, 74.5% had dyspareunia and 3.92% had post menopausal bleeding. [11] In our study also menorrhagia was the common symptom of the patient followed by dysmenorrhoea and chronic pelvic pain.

In the study done by Ramesh showed that adenomyosis is common in multiparous women accounting to 36.8%. Other studies also have showed the similar prevalence. In our study also majority were multiparous women. This correlates with the hypothesis that the pregnancy may facilitate the formation of adenomyosis by increased intrauterine pressure and invasive nature of the trophoblasts facilitate the implantation of endometrial tissue into myometrium.[8]

The preoperative diagnosis of adenomyosis based on clinical signs and symptoms is very low. In this study only 15.8% of cases were diagnosed preoperatively which was in accordance to other studies.[1,3]

Many co-existing pathologies can occur with adenomyosis but the most of the studies have shown leiomyomas to be common association which was also found in our study. [3,12] Next common was chronic cervicitis.

Majority of the patients with menstrual disturbances had Grade II and grade III involvement by adenomyosis. Among these patients majority had menorrhagia as the common symptom followed by dysmenorrhoea and chronic pelvic pain. The degree of involvement by the adenomyotic foci was proportional to the menstrual disturbances in which dysmenorrhoea was common in severe degree of involvement and penetration with moderate degree. Grade III patients had dysmenorrhoea. This was in accordance to Vorza study. So, it can be considered that higher the grade and degree of adenomyosis greater is the menstrual disturbances.[5]

Conclusion

Adenomyosis is a common entity more prevalent in middle age and multiparous. The usual presentation was abnormal uterine bleeding followed by dysmenorrhoea and chronic pelvic pain. The most common co-existing pathology was fibroid. The study showed that deeper the penetration into myometrium and increase in the number of glands in adenomyotic foci increases the severity of symptoms. Since the pathology is unknown more studies are required to know the pathogenesis.

References

1) Siddegowda MS, Manjunath MR, Shivakumar S. Occurance of adenomyosis in hysterectomy specimen and its clinical correlation in a tertiary care hospital in Mandya, Karnataka, India. International journal of scientific study 2015; 3(6): 61-64.
2) Shrestha A, Shrestha R, Sedhai LB, Pandit U. Adenomyosis at Hysterectomy: Prevalance, Patient Characteristics, Clinical Profile and Histopathological Findings. Kathmandu University Medical Journal 2012; 10(1): 53-56.

3) Arunachalam B, Manivasakan J. A Clinico-Pathological study of Adenomyosis. Journal of Clinical and Diagnostic Research 2012; 6(3): 428-430.
4) Emge LA. Elusive adenomyosis of the uterus. Its historical past and its present state of recognition. Am J Obstet Gynaecol 1962; 83: 1541-63.
5) Vora IM, Raizada RM, Chadda JS. Adenomyosis. Journal of Postgraduate Medicine 1981; 27 (1): 1-4.
6) Ferenezy A. Pathophysiology of Adenomyosis. Hum Reprod Update 1998; 4(4): 312-22.
7) Pervez SN, Javed K. Adenomyosis among samples from hsterectomy due to abnormal uterine bleeding. Ayub Med Coll Abbottabad 2013; 25: 68-70.
8) Ramseh BH, Shashikala P, Doddikoppad, Chandrashekar HR. A study of prevalence and risk factors of adenomyosis at hysterectomy. Indian Journal of public health research and development 2013; 4(2): 203-206.
9) Vercellini P, Parazzini, Oldani S, Panazza S et al. Adenomyosis at hysterectomy a study on frequency distribution and patient characteristics. Human reproduction 1995; 10:1160-62.
10) Yamamoto T, Noguchi T, Tamura T, Kitawaki J, Okada H. Evidence of estrogen secretion in adenomyotic tissue. Am J Obstet Gynecol 1993; 169: 734-38.
11) Khreisat B, Al-Rawabdeh S, Duqoum W. Adenomyosis: the frequency of hysterectomy in the histopathological specimens at two Jordanian military hospitals. JRMS 2011; 18(2): 76-79.
12) Langthasa A, Saikia C. histopathological correlation of Adenomyosis and Leiomyoma in hysterectomy specimens as the cause of abnormal uterine bleeding in women of 20-60 years age group. International Journal of Medical science and clinical intervention 2016; 3(7): 1992-1997.