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INCIDENCE OF ADENOMYOSIS AND THEIR ASSOCIATIONS WITH OTHER UTERINE WALL PATHOLOGIES IN HYSTERECTOMY SPECIMENS

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ABSTRACT

BACKGROUND: Adenomyosis is a gynaecological condition in which there occurs an ectopic endometrial tissue in myometrial layer of uterine wall. Adenomyosis is one of the most common causes of abnormal uterine bleeding.

OBJECTIVE: To determine the incidence of adenomyosis and their association with other uterine pathologies in hysterectomy specimens in northern district of Khyber pukhthunkhwa.

MATERIALS AND METHODS: This descriptive study was conducted in Gynecology department and Pathology department of Saidu Medical College / Saidu teaching hospital Swat. The study period was from June 2013 to June 2016. A total of 250 hysterectomies were included in the study. The inclusion criteria was only hysterectomies specimens of any age, whereas exclusion criteria were autolysed specimen. A minimum of two sections and a maximum of six sections were taken from the uterine wall. Sections 5 micron thick were stained with H&E and reported by histopathologists. The data was analysed in Statistical Package for Social Sciences (SPSS) version 16 for frequencies with percentages and mean with standard deviation.

RESULTS: A total of 250 hysterectomies were included in this study with mean age of 37.5±8.47 years and age range was from 25 to 65 years. The incidence of adenomyosis was 34.8% amongst 250 hysterectomies specimens and was the second common lesion where as leiomyoma was the first common lesion. The most common age group in adenomyosis was between 35-45 years 43(49.42%) cases followed by 25-35 years 32(36.78%) cases etc. Adenomyosis was present in 84(95.40%) cases with endometrial wall thickness of more than 2.5 millimeter.

CONCLUSION: Adenomyosis was the second commonest lesion in hysterectomy specimen and was significantly associated with other uterine pathologies.

KEY WORDS: Hysterectomy, Adenomyosis, Uterine wall thickness.

INTRODUCTION

Adenomyosis is ectopic presence of histologically benign endometrial tissue within the myometrium. General incidence of adenomyosis has not been accurately determined. In hysterectomy specimens the incidence of adenomyosis reported in the literature varies, ranging from 5% to 70%.[1,2,5] The pre-operative diagnosis of adenomyosis is based on clinical findings is very poor. It is asymptomatic in up to one half of the patients. The symptomatic patients present with menorrhagia, dysmenorrhea, pelvic pain, and rarely dyspareunia.[3,6]

On gross examination the uterus is enlarged and on cut section, there is diffuse thickening of the uterine wall with haemorrhagic spots. The diagnosis is based on the presence of islands of endometrial glands and stroma deep within the uterine myometrial wall. The depth of endometrial tissues within the myometrium should be at least one low-power microscopic field (2-3 mm) from the basal endometrium.[4,7] In adenomyosis there is usually no gross abnormality in uterus except increase in uterine wall thickness and diagnosis is entirely based on microscopic findings.[5,8]

Microscopic foci of adenomyosis can be present in vascular spaces and are harmless when is focal and no mass is present.[6, 7]

Muscular hypertrophy is a characteristic of adenomyosis and is absent in stromal sarcoma. Also it is rare in endometrial stromal sarcoma to have small regularly placed glands diffusely present in the lesion.[8,9] The aetiology of adenomyosis is poorly understood. It is the migration of endometrial glands from the basal layer of the endometrium into the myometrium, associated with smooth muscle hyperplasia.[11,12] Incidence of adenomyosis increases with age, peaks age is 40-50 years and decreases after menopause. Incidence also increases with multiparity. Irregular menstrual periods, smoking, dilatation, and curettage also increases the risk of adenomyosis.[13, 14]

In this study incidence of adenomyosis and their relation with uterine wall thickness in hysterectomy specimens was studied in the northeran districts of Khyber Pakhtun Khwa.

MATERIALS AND METHODS

This retrospective descriptive study was carried out in Gynaecology department and Pathology Department of Saidu Medical College / Saidu Teaching Hospital Swat in collaboration with Department of Pathology Bannu Medical College Bannu. The study period was from June 2013 to June 2016. A total of 250 hysterectomies were included in the study. The specimen collected was mostly from gynaecologist and general surgeons of the region. The biopsy specimen were collected in 10% formalin along with properly filled request forms containing name, age, complaints i.e. menorrhagia, per vaginal bleeding, abdominal mass etc. The inclusion criteria were all hysterectomies with or without salpingoophorectomy were included in the study. The exclusion criteria were autolysed specimens. The biopsy was properly labeled and record registered.

Gross examination of the uterus i.e size, shape, wall thickness, endometrial cavity and any mass were noted, sections were taken from different parts of uterus especially from uterine wall, minimum of two and maximum of six sections were taken from the uterine wall. The different sections taken were processed manually in different grades of ethanol followed by xylene, and paraffin wax. Blocks were prepared and freezed in refrigerator and than five micron thik sections taken. Then slide prepared were processed for staining of Hematoxylin and Eosin and lastly mounted with DPX, labeled and reported by histopathologist.

RESULTS

A total of 250 hysterectomies were included in this study with mean age of 41.5±18.47 years and age range was from 25 to 65 years. The most common age group in adenomyosis was between 41-50 years 43(49.42%) cases followed by 31-40 years 32(36.78%) cases etc. Table-1.

Table-I: Distribution of age groups in adenomyosis of hysterectomy patients (n=87).

S. No.	Age group in years	No of adenomyosis cases	Percentages
1	21-30	01	1.14%
2	31-40	32	36.78%
3	41-50	43	49.42%
4	51-60	07	8.04%
5	>61	04	4.59%
6	Total	87	100%

The incidence of adenomyosis was 34.8% amongst 250 hyterectomies specimens and was the second common lesion where as leiomyoma was the first common lesion. Adenomyosis was present in 84(95.40%) cases with endometrial wall thickness of more than 2.5 millimeter. Adenomyosis was associated with uterine leiomyomas in 47(54.02%), endometrial polyp 07(8.04%), endometrial hyperplasia in 5(5.74%) and chronic endometritis in 2(2.29%) cases. (Table-II)

Table-II: Association of adenomyosis with other uterine pathologies (n=87).

S. No.	Other uterine wall pathologies	Number of cases	Percentages
1	Leiomyoma	47	54.02%
2	Endometrial polyp	07	8.04%
3	Endometrial hyperplasia	05	5.74%
4	Chronic endometritis	02	2.29%

DISCUSSION

Adenomyosis is non neoplastic and most common in adults women presenting with enlarged uterus and abnormal bleeding or may be an incidental finding in hysterectomy specimen.[15,16] The incidence of adenomyosis varies in different studies ranging from 5-70%. It is important to have a properly oriented tissue histological sections as a tangential cuts may mimic adenomyosis. Adonomyosis may have an association with leiomyoma[17-19].

In this study with mean age was 41.5±18.47 years with age range from 25 to 65 years. In a study conducted by Pervez et al[9] in 2013 in Peshawar the age range was from 27–62 years with mean age of 44.5±24.74 years. Another study conducted by Siddegowada et al[8] in 2015 in India the age range was from 21 to 80 years with mean age of 50.5 years. Still another study conducted by Shrestha et al[4] in Nepal in 2012 the age range was 26-76 years with mean age of 45 ±8.4 years. Another study conducted by Gupta et al[10] in 2009 in India show age range of 20 to 80 years. All these studies show differences in age range, may be due different surgical trends regarding hysterectomy.

In this the most common age group in adenomyosis was between 36-45 years 43(49.42%) cases followed by 26-35 years 32(36.78%) cases etc. In a study conducted by Pervez et al[9] the commonest age group was 41-50 years with 51% cases of adenomyosis followed by 31-40 years with 47.8% cases. Another study conducted by Siddegowada et al[8] show 59.4% cases in the age group og 41-50 years followed by 26.58% cases in age group of 31-40 years, and only 3.16% cases in the age group of 21-30 years. A study conducted by Gupta et al[10] show age range of 40-49 years the commonest age group with 51.40% cases of adenomyosis followed by 21.40% in age group of 30-39 years and 19.60% in age group of 50-59 years age group.

In this study the incidence of adenomyosis was 34.8% amongst 250 hyterectomies specimens where as in a study conducted by Pervez et al[9] show incidence of adenomyosis in 50.6% cases. Another study conducted by Siddegowada et al[8] show incidence of adenomyosis in 16.59% cases. Still another study conducted by Shrestha et al[4] adenomyosis was diagnosed in 60(23.4%) out of 256 cases. In a study conducted by Gupta et al adenomyosis was diagnosed in 121 (24.20%) cases out of 500 specimens of hysterectomy. In this study adenomyosis was associated with uterine leiomyomas in 47(54.02%), endometrial polyp 07(8.04%), endometrial hyperplasia in 5(5.74%) and chronic endometritis in 2(2.29%) cases. In a study conducted by Pervez et al[9] show association of other uterine pathologies in the following manner i.e. uterine leiomyomas in 50.6%, endometrial polyp 5.4%, chronic endometritis in 3.3% and endometrial hyperplasia in 1.6% cases. Another study conducted by Siddegowada et al[8] show leiomyoma in 32.91% followed by endometrial hyperplasia in 4.43%, endometrial atrophy in 3.16% and endometrial polyp in 1.265 cases.

CONCLUSION

Adenomyosis is the second commonest lesion in hysterectomy specimens and is significantly associated with other uterine pathologies in this study.

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