The Professional Medical Journal
www.theprofesional.com

https://doi.org/10.29309/TPMJ/2020.27.12.4703

ORIGINAL PROF-0-4703

Clinical features of adenomyosis proven on histopathology in hysterectomy specimens: An experience at teaching hospital.

1. MBBS, M.Phil (Histopath), FCPS (Chem. Path).
Assistant Professor Pathology
Quaid-e-Azam Medical College, Bahawalpur.
2. M.Phil (Histopath), Ph.D Scholar.
Associate Professor Pathology
Sahiwal Medical College, Sahiwal.
3. MBBS, FCPS (Gynaecology)
Assistant Professor Gynaecology and Obstetrics
King Edward Medical University, Lahore.
4. MBBS, FCPS (Medicine)
Senior Registrar Medicine
Bahawal Victoria Hospital, Bahawalpur.

Correspondence Address:
Dr. Sadaf Shafique
M.Phil, FCPS
Department of Pathology
Quaid-e-Azam Medical College, Bahawalpur.
drsadafshafiq@gmail.com

Article received on:
07/04/2020
Accepted for publication:
14/06/2020

Sadaf Shafique[1], Raees Abbas Lail[2], Mahham Janjua[3], Raheel Khan[4]

ABSTRACT… Objectives: To study the clinical features of adenomyosis in hysterectomy specimens which have been proved on histopathology. **Study Design:** Descriptive study. **Setting:** Department of Pathology, Quaid-e-Azam Medical College & its Allied Institutes. **Period:** Jan 2018 to December 2019. **Material & Methods:** A total specimen of 105 was included in the study and the medical records were examined retrospectively. SPSS v.23.0 was used for data collection and analysis. **Results:** A total of 105 specimens were included in study. Menorrhagia (55.2%) was most common presenting symptom, most of the patients were multiparous (96.2%) & Dysfunctional uterine bleeding was most common clinical diagnosis (60.0%). Statistical significance was found between different age groups, presenting symptoms & clinical diagnosis. **Conclusion:** Menorrhagia is most common presenting symptom of adenomyosis, and clinical diagnosis of dysfunctional uterine bleeding was most common. So adenomyosis remain under diagnosed clinical condition.

Key words: Adenomyosis, Dysmenorrhea, Dysfunctional Uterine Bleeding, Ectopically, Myometrium, Menorrhagia, Multiparous.

Article Citation: Shafique S, Lail Ra, Janjua M, Khan R. Clinical features of adenomyosis proven on histopathology in hysterectomy specimens: An experience at teaching hospital. Professional Med J 2020; 27(12):2686-2690. https://doi.org/10.29309/TPMJ/2020.27.12.4703

INTRODUCTION

In 1860 the first definition of the word 'adenomyoma' was coined by a German pathologist named Carl Von Rockitansky. He found endometrial glands in the myometrium and referred this finding to as 'cystosarcoma adenoids uterinum'.[1] The latest definition of adenomyosis was published in 1972 by Bird who defined it as presence of ectopically benign endometrial glands and adjoining stroma surrounded by hypertrophic myometrium. There are various mechanisms which may cause the deep invasion of endometrial glands into the myometrium which include previous multiple pregnancies or surgeries causing weakness of the myometrium or decreased immunological process at the interface of endometrium and myometrium.[2] other causes which have been proposed to cause adenomyosis are inheritable genetic factors, use of tamoxifen and increased prolactin levels.[3]

Spontaneous miscarriages, curettage, resection of endometrium hysteroscopically and ceasarean section are also considered one of the few factors causing to develop this phenomenon. According to the latest research, tobacco is seen to a protective factor as it causes reduced levels of estrogen.[4]

There is also an alternative theory suggested by the researchers that it has been caused by metaplasia of pluripotent mullerian tissue.[1] still today the pre operative diagnosis of adenomyosis is poor and is almost always an incidental finding on microscopy after being operated for hysterectomy for the other benign diseases.[5]

According to the literature the incidence of adenomyosis in the hysterectomy specimens is approximately 50-70%[6] whereas the pre operative diagnosis which has been based on clinical picture is entirely poor being only 2.6-26%.[7] this condition is seen to affect mostly the multiparous women of above forty years of age.[8]

One third of the patients remain asymptomatic and if there are any signs and symptoms, they are mostly non specific consisting mainly pelvic pain, menorrhagia and menometrorrhagia. Pelvic pain is likely to be due to increased production of prostaglandins whereas menorrhagia due to increased vascularization of endometrium.[2]

Our study aimed to study the clinical features of adenomyosis in hysterectomy specimens which have been proved on histopathology.

MATERIAL & METHODS

This study was done in order to assess the clinical picture of the patients who have been diagnosed with the histopathological diagnosis of adenomyosis. This descriptive study was done in 105 patients in the Department of Pathology, Quaid-e-Azam Medical College Bahawalpur during the period of January 2018 to December 2019.

All the 105 patients who have undergone abdominal or vaginal hysterectomies were included with the diagnosis of adenomyosis on histopathological examination. Their medical records were examined which consisted of age, parity, signs and symptoms, their clinical presentation and pre operative diagnosis. Patients with associated conditions such as leiomyomas, polycystic ovaries, malignancies and other co morbidities were excluded from the study. The sections from the uterus were taken, stained with the haematoxylin eosin stains and then examined under the microscope. On gross examination the criteria for the diagnosis of adenomyosis was asymmetric and globular enlargement of uterus associated with hypertrophy of myometrium. On cut surface, ill defined swirls of smooth muscle and petechiae like foci of endometrium are seen with cystic areas of hemorrhage.[9]

On microscopy, adenomyosis is diagnosed when there are endometrial glands and stroma in the myometrium more than one low power field away from the endo-myometrial junction.[10]

SPSS v.23. was used to for data entry and analysis. Frequencies and percentages were calculated for qualitative variables and are expressed in form of figures. Mean and standard deviation were calculated for quantitative variables. Post-stratification chi-square tests were applied for confounding variables.

RESULTS

A total of 105 hysterectomy specimens with the histopathological diagnosis of adenomyosis were analyzed. The mean age of patients was 43.21 + 7.23 years. Most of the patients, 98(93.3%), were of age less than 50 years. Six (5.7%) patients were of age between 51 and 60 years whereas only 1.0 (1.0%) was of the age group between 61 and 70 years. Prevalence was found to be 96.2% in multiparous women, which was much greater than those in uniparous (3.8%). The major symptoms were menorrhagia in 55.2%, dysmenorrhea in 28.6% followed by chronic pelvic pain in 16.2%. The pre operative diagnosis was mostly dysfunctional uterine bleeding in 60% of the patients; post menopausal bleeding in 16.2%, uterine fibroid in 12.4%, adenomyosis in 9.5% and uterovaginal prolapse in only 2%.

Mennorhagia was most common presenting symptom in age group less than 50 years & clinical diagnosis of dysfunctional uterine bleeding was most common clinical diagnosis (p value > 0.05). No statistical significance was found in between age groups and parity status of patients.

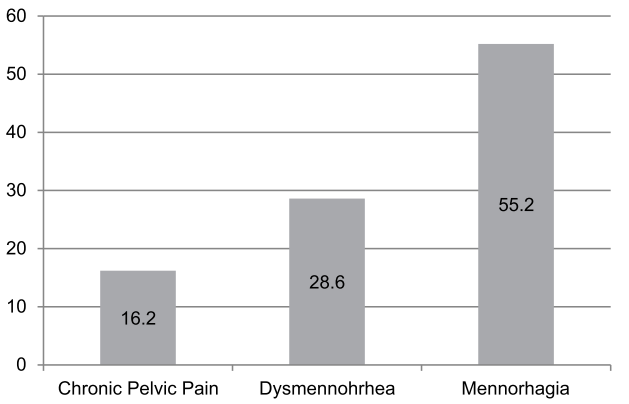

Figure-1. Presenting clinical symptoms (in percentages)

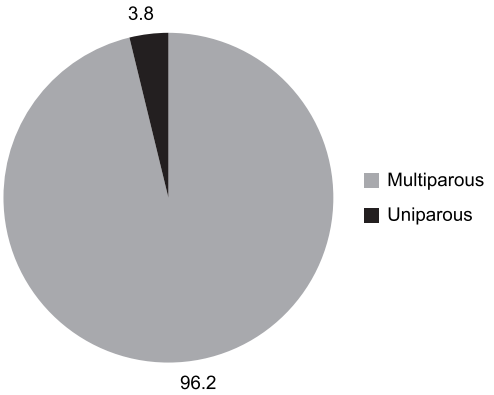

Figure-2. Parity status of patients (In percentages)

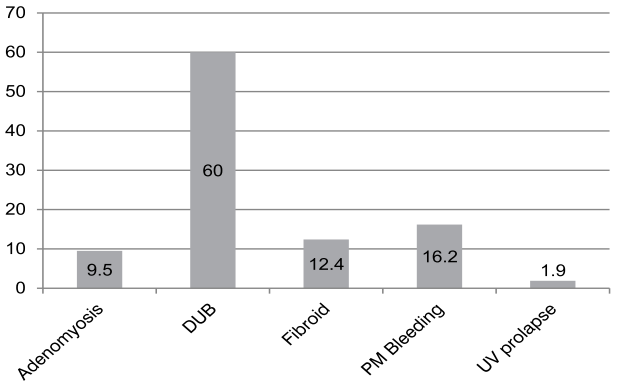

Figure-3. Clinical diagnosis of the patients (in percentages)

		Presenting Symptoms			Total	P-Value
		Chronic Pelvic Pain	Dysmenorrhea	Menorrhagia		
Age groups	Less than 50 Years	11	30	57	98	Less than 0.01
	51-60 years	5	0	1	6	
	61-70 years	1	0	0	1	
Total		17	30	58	105	

Table-I. Presenting symptoms in different age groups

		Pre-operative Diagnosis					Total	P-Value
		Adenomyosis	DUB	Fibroid	PM bleeding	UV Prolapse		
Age groups	Less than 50 Years	10	61	13	13	1	98	0.013
	51-60 years	0	2	0	3	1	6	
	61-70 years	0	0	0	1	0	1	
Total		10	63	13	17	2	105	

Table-II. Age groups and clinical diagnosis

DISCUSSION

Not many studies are available regarding the clinical profiles related to the phenomenon of adenomyosis. According to the SWANS study, the commonest age group affected by adenomyosis was 49.5±3.4[11] whereas in the study done by Sreelakshmy et al all patients were above 40 years of age.[12] In another study done by Sabins, the largest number of patients, 70%, were present in the age group of 41-50 years and only 2.0% were present in the age groups of 21-30 and 51-60 years.[13] But in our study most of the patients, 93.3% were below 50 years of age, 5.7% were between 51 and 60 years of age and only 1.0% of age between 61 and 70 years.

Our study is also consistent with the previous studies being having mostly multiparous patients i.e. 78%.[12]

In khreisats study, the predominant symptom was also menorrhagia, 70.5% and 3.92% had post menopausal bleeding.[14] According to Sreelakshmy et al, 56% had menorrhagia followed by dysmenorrhea in 48% of the patients.[12] This was in consensus with our study being menorrhagia as the main symptom in 55.2% of patients and dysmenorrhea in 28.6%.

In the previous study done by Sreelakshmy et al, the pre operative diagnosis of dysfunctional uterine bleeding was highest in 32% patients, uterine fibroid and utero vaginal prolapsed each present in 24%, post menopausal bleeding in 14 % whereas adenomyosis actually in only 8%.[12] In other studies also done by Vavilis

et al adenomyosis was poorly diagnosed preoperatively in 2.6% of the patients.[15] This was somewhat similar in our study being mostly the dysfunctional uterine bleeding as the pre operative diagnosis in 60% followed by uterine fibroid in 12.4% and adenomyosis in only 9.5% of the patients.

CONCLUSION

Menorrhagia is most common presenting symptom of adenomyosis, and clinical diagnosis of dysfunctional uterine bleeding was most common. So adenomyosis remain under diagnosed clinical condition.

ACKNOWLEDGEMENT

We fully appreciate the help of all technicians and histotechnologists working at Department of Histopathology, QuaideAzam Medical College Bahawalpur.

REFERENCES

1. Benagiano G, Brosens I. **History of adenomyosis.** Best Pract Res Clin Obstet Gynaecol. 2006; 20:449–463. [PubMed] [Google Scholar].

2. Hoffman BL. **Pelvic mass.** Williams Gynaecology. 2nd ed. Texas: MC Graw Hill; 2008:259-61.

3. Emge LA. **Elusive adenomyosis of uterus. Its historical part and its present state of recognition.** Am J Obstet Gynaecol. 1962; 83:1541-63.

4. Huang H, Yu H, Chan S, Lee C, Wang H, Soong Y. **Eutopic endometrial interleukin-18 system mRNA and protein expression at the level of endometrial-myometrial interface in adenomyosis patients.** Fertility and Sterility. 2010; 94(1):33-39.

5. Weiss G, Maseelall P, Schott LL. **Adenomyosis is a variant, not a disease? Evidence from hysterectomized menopausal women in the Study of Women's Health Across the Nation (SWAN).** Fertil Steril. 2009; 91(1):201-6.

6. Shrestha A, Shrestha R, Sedhai LB. **Adenomyosis at hysterectomy: Prevalence patient characteristics, clinical profile and histopathological findings.** Kathmandu University Med J. 2012; 37(10):53-56.

7. Reinhold C, Tafazolu F, Wang L. **The imaging features of adenomyosis.** Hum Reprod Update. 1998; 4:37-49.

8. Siegler AM, Camilien L. **Adenomyosis.** J Reprod Med 1994; 39: 841-53.

9. Bazot M, Cortez A, Darai E, Rouger J, Chopier J, Antoine JM et al. **Ultrasonography compared with magnetic resonance imaging for the diagnosis of adenomyosis: Correlation with histopathology.** Human Reprod. 2001; 16(11):2427-33.

10. Rizvi G, Panday H. **Histopathological Correlation of adenomyosis and leiomyoma in hysterectomy specimens as the cause of abnormal uterine bleeding in women in different age groups in Kumaon region a retrospective study.** J Mid-life Health. 2013; 4(1):27-30.

11. Weiss G, Maseelall P, Schott LL. **Adenomyosis is a variant, not a disease? Evidence from hysterectomized menopausal women in the Study of Women's Health Across the Nation (SWAN).** Fertil Steril. 2009; 91(1):201-6.

12. Sreelakshmy K, Nair RV, Rajmohan V. **A retrospective study of the clinical features of 50 consecutive cases diagnosed to have adenomyosis by histopathology in hysterectomy specimens in a tertiary centre.** Int J Reprod Contracept Obstet Gynecol 2017; 6: 2791-3.

13. Ranabhat SK, Shrestha R, Tiwari M, Sinha DP, Subedee LR. **A retrospective histopathological study of hysterectomy with or without salpingoophorectomy specimens.** JCMC. 2010; 1(1):26-29.

14. 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.

15. Vavilis D, Agorastos T, Tzafetas J. **Adenomyosis at hysterectomy: Its prevalence and its relationship to the operative findings and the reproductive and menstrual factors.** Clin Exp Obstet Gynaecol. 1997; 24:36-8.

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Sadaf Shafique	Collection of data, Conception and design.	
2	Raees Abbas Lail	Manuscript writing.	
3	Mahham Janjua	Editing and review of manuscript.	
4	Raheel Khan	Statistical analysis and final review of manuscript.	