

Incidence of Adenomyosis and its association with other benign lesions in Hysterectomy with BSO.

*Memon GR, **Siyal AR, ***Pathan MI

Abstract

Objectives: To determine the incidence of adenomyosis and to assess its association with co-existing benign lesions.

Methodology: This prospective cross section study carried out at the Department of Pathology, Muhammad Medical College Mirpurkhas Sindh Pakistan from 1st January 2016 to 31st December 2016. Total 53 cases of hysterectomies with BSO were assessed. All specimens were grossly examined in detail and processed through hematoxylin and eosin stains. All the sections were examined for adenomyosis and its associated co-existing benign lesions.

Results: Out of 53 specimens of hysterectomies with BSO, in 39.6% were found adenomyotic foci. The patients mean age was 40 years. Besides adenomyosis alone 14.2%, the associated co-existing benign lesion were ovarian cysts (57.1 %). Endometrial polyps and adenomyomatous Polyps (19 %) and Leiomyomas (9.5 %).

Conclusion: Adenomyosis is common in middle aged women. The ovarian cysts are frequent co-existing benign lesions of adenomyosis.

Key Words: Adenomyosis, Bilateral Salpingo-oophorectomy, Hysterectomy.

Introduction:

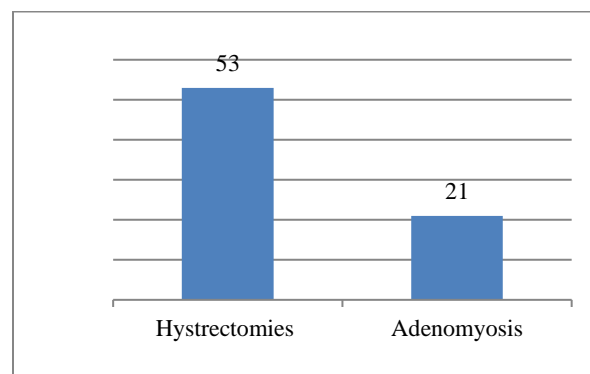
The word adenomyosis is derived from the Greek term, adeno (gland), myo(muscle) and osis (condition). Presence of ectopic glandular tissue in muscle¹. Adenomyosis is defined as presence of endometrial glands and stroma within the myometrium². The difference in between endometriosis and adenomyosis is that, endometrial tissue is present outside the uterus, while in adenomyosis it is present inside the uterus, both are steroid hormone dependent conditions and as a normal endometrium their development is regulated by the levels of estrogen and progesterone³. The condition is typically found in women between the age of 35 to 50 years. Patient with adenomyosis can have painful and / or profuse menses dysmenorrhea and menorrhagia respectively however because the endometrial glands could be trapped in the myometrium, it is possible to have increased pain without increased blood loss. In adenomyosis basal endometrium penetrates in to the hyperplastic myometrial fibers, therefore unlike functional layer, basal layer does not undergo typical cyclic changes with menstrual cycle⁴. Adenomyosis is a benign condition of the uterus. The presence of endometrial glands as well as stromal elements situated at least 2.5 mm below endometrial junction. The minimal distance necessary for diagnosis has been debated but range from 2 mm to 4 mm or one to two low power fields below the endometrial junction is considered necessary⁵. The objective of this study is to assess adenomyosis and its association with other benign lesion in hysterectomy with BSO specimens.

Methodology:

This prospective cross section study carried out at the department of pathology, Muhammad Medical College Mirpurkhas Sindh Pakistan from 1st January 2016 to 31st December 2016. The study consisted all 53 cases of total abdominal hysterectomies with bilateral salpingo-oophorectomies, which were surgically

removed during the year 2016 at hospital attached with Medical college. Each hysterectomy with BSO specimen was grossly examined in detail. The representative sections were taken from cervix, body of uterus, both ovaries and fallopian tubes. They were processed for hematoxylin and eosin stains. The microscopic findings were recorded. The criteria for diagnosis of adenomyosis was the presence of the endometrial glands, stroma or both at one and half low power field (2.5mm) below the junction of endometrium and hypertrophied or plump smooth muscle fibers surrounding the endometrial tissue deep in the myometrium⁶.

Results: Out of 53 specimens of hysterectomies with BSO. 39.6 % had foci of adenomyosis. Hysterectomy to adenomyosis ratio was 2.5:1. The age of patient with adenomyosis ranges from 30 to 50 years, with mean age of 40 years.



Out of 53 hysterectomies adenomyosis found in 21 cases (39.6 %). Hysterectomy to adenomyosis ratio was 2.5:1. Besides adenomyosis alone (14.2 %) it had been associated with other lesions, such as cystic follicles and follicular cysts (57.1 %). Endometrial and adenomyomatous Polyps (19%) leiomyomas (9.5%).

LESION	NO: OF CASES n =21	PERCENTAGE
Adenomyosis	03	14.3
ASSOCIATION WITH		
Follicular cysts and cystic follicles	12	57.1
Endometrial and adenomyomatous Polyps	04	19.0
Leiomyomas	02	9.5

Adenomyosis and its association with other lesions.

Discussion:

The adenomyosis is a common condition in middle aged women, who undergone hysterectomy due to dysmenorrhea, menorrhagia and chronic pelvic pain. In literature it had been reported that incidence and prevalence of adenomyosis is 5-70%⁵⁻⁷. In our study 39.6% cases were found. The variation in reporting is due to criteria of distance below endometrial junction to the myometrium. In this study the distance below, endometrial junction was considered one and half low power fields (2.5 mm), which is more frequently accepted⁸. Adenomyosis may mask other associated pathological conditions as leiomyomas, endometrial or adenomyomatous Polyps, endometrial hyperplasia and endometritis, so it may cause difficulty in the management⁹. It has been reported that adenomyotic foci were ER positive in 71.5% of cystic follicles and follicular cysts, but all the adenomyotic foci associated with non – functional cysts were ER negative⁶. In our study cystic follicles and follicular cysts associated with adenomyosis were 57.1%. The result of which correlates with the previous studies. The cystic follicles or follicular cysts are functional cysts and contains estrogen in their Luminal fluids, especially follicular cysts¹⁰⁻¹¹, but non – functional cysts do not secrete estrogen¹². Functional ovarian cysts may be responsible for adenomyosis. Although adenomyosis is associated with other uterine pathologies, it is yet to be proved besides other causes, which factors influence adenomyosis.

Conclusion:

Adenomyosis is common in middle aged women. The ovarian cysts are frequently associated with adenomyosis. This condition is masked by other uterine pathologies, so clinically sometimes it is difficult to diagnose.

References:

1. Adenomyosis
http://web.archive.org/web/20090616022448/http://www.mercksource.com/pp/us/cns/cns_hl_dorlands_split.js?pg=/ppdocs/us/common/dorlands/dorland/one/000001691.htm at Dorland's Medical Dictionary.

2. Draghici IM, Draghici L, Cojocaru M, Gorgan CL, Vrabie CD. The immunoprofile of interstitial Cajal cells within adenomyosis / endometriosis lesion. Rom J Morphol Embryol. 2015; 56:133-8.
3. Parente Barbosa C, Bentes De Souza AM, Bianco B, Christofolini DM. the effect of hormones on endometriosis development. Minerva Ginecol. 2011; 63:375-86. Pmid21747346.
4. Katz VL (2007). Comprehensive gynecology (5th ed.) Philadelphia Mosby Elsevier.
5. Azziz R. Adenomyosis current perspectives. Obstet Gynecol Clin N Am 1989,16:221-3.
6. Sadaf Alam , Sajjad Ahmed , Muhammad M. Khan. Role of benign ovarian cysts in the development of adenomyosis. Saudi Med J. 2016 September; 37(9): 963-967.
7. Vercellini P, Vigano P, Somigliana E, etal. Adenomyosis: epidemiological factors. Best Pract Res Clin Obstet Gynaecol 2006; 20:465-77.
8. Zaloudek C, Norris HJ. Mesenchymal tumours of the uterus. In: Kurman, RJ (ed). Blaunstein's Pathology of the Female Genital tract. 3rd ed. New York: Springer Verlag; 1987. p.374.
9. Mehla S, Singh M, Chutani N. Clinicopathological Correlation of Adenomyosis and Leiomyoma in Hysterectomy Specimens as the cause of Abnormal Uterine Bleeding: A Retrospective study. Sch J App Med Sci. 2014; 2:3320-3323.
10. Ellenson LH, Pirog EC. Ovaries Nonneoplastic and Functional Cysts. In: Kumar V, Abbas AK, Aster JC, editors. Robbins and Cotran Pathologic Basis of Disease 9th ed. Philadelphia (US): Elsevier Saunders;2015. p.1022.
11. Mutter GL, Part J. The Female Reproductive System and Peritoneum. In: Strayer DS, Rubin E, editors. Rubin's Pathology: Clinicopathologic Foundations of Medicine. 7th ed. Philadelphia (US): Lippincott Williams & Wilkins;2015. p.1032.
12. Grimes DA, Jones LB, Lopez LM, Schulz KF. Oral Contraceptives for functional ovarian cysts. Cochrane Database Syst Rev.2014;29CD006134[PubMed]

***Ghulam Rasool Memon**, Assistant Professor of Pathology, Muhammad Medical College, Mirpurkhas.

****Abdul Rahim Siyal**, Professor of Pathology, Muhammad Medical College, Mirpurkhas

*****Muhammad Iqbal Pathtan**, Associate Professor of Paediatrics, Muhammad Medical College, Mirpurkhas.