

Histological Study of Uterine Leiomyoma in Hysterectomy Specimen: Retrospective Study at Tertiary Care Center

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ABSTRACT

Background: The uterine pathology is currently the most common and widest problem affecting the women of reproductive age group mainly through uterine leiomyoma. It is second most common involved site after cervix in female genital tract.[1]

Objective: The objective of this study was to evaluate the uterine leiomyoma with respect to location and other associated pathologies in hysterectomy specimens.

Materials and Methods: This was a retrospective study conducted on 660 hysterectomy specimen received in our pathology department. Age, parity and other clinical details noted from records. Histomorphological features of leiomyoma and other associated pathology were evaluated by conducting careful microscopic examination.

Result: Uterine leiomyoma was most common in the age group of 41-50 years (53.6%). Most common location of leiomyoma was intramural (64%). Proliferative endometrium was the most common endometrial pattern (65 %) in uterine leiomyoma. Associated malignant lesion (carcinoma cervix) was observed in one case (0.15 %) of uterine leiomyoma.

Conclusion: Uterine leiomyoma is associated with other pathology .Histopathological examination of hysterectomy specimens should be done to confirm the diagnosis and rule out other pathologies, especially malignant lesions

Keywords: Uterine Leiomyoma, Hysterectomy

INTRODUCTION

The Uterine pathology is currently the most common and widest problem affecting the women of reproductive age group mainly through uterine leiomyoma. It is second most common involved site after cervix in female genital tract .[2] Variety of tumors both benign and malignant arises from uterus but the leiomyoma(fibroid) Benign tumor is more common affecting 5-20% women of reproductive age group. These tumors arise from smooth muscle cells of myometrium.[3] Hysterectomy is a mode of therapy in uterine Leiomyoma.

MATERIALS AND METHODS: This was a retrospective study conducted on 660 hysterectomy

specimen received in our pathology department. Age, parity and other clinical details noted from records. Histomorphological features of leiomyoma and other associated pathology were evaluated by conducting careful microscopic examination.

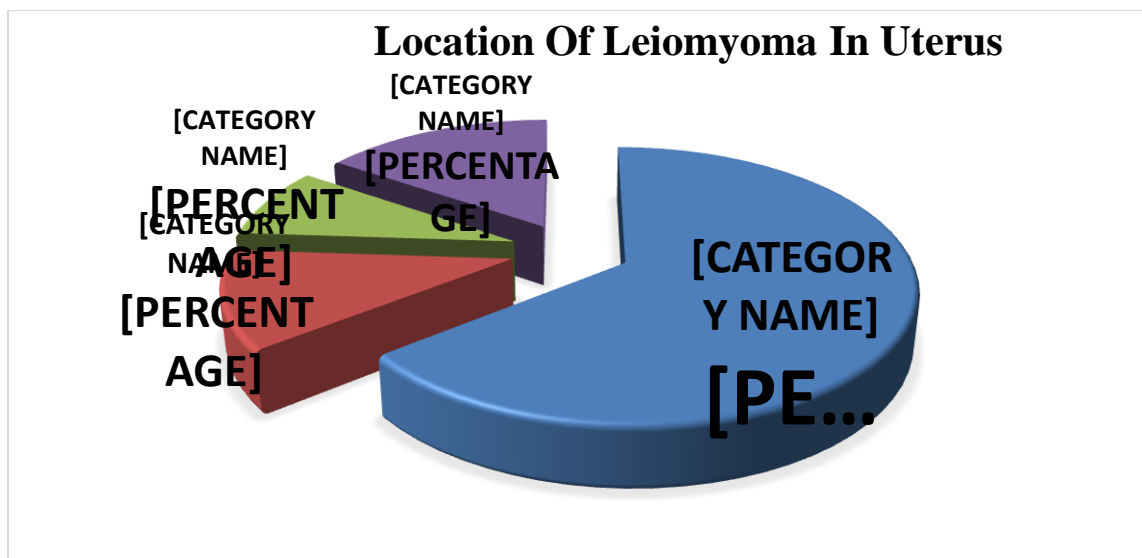
RESULTS: Uterine leiomyoma was most common in the age group of 41-50 years (53.6 %). Most common location of leiomyoma was intramural (64.3%). Proliferative endometrium was the most common endometrial pattern (57.5 %) in uterine leiomyoma. Associated malignant lesions were observed in one case (0.15%) of uterine leiomyoma.

Table 1: Age Group of Patients with Leiomyoma

Age Group (Years)	Number Of Cases (N= 660)	Percentage (%)
21-30	22	3.3%
31-40	180	27.2 %
41-50	354	53.6 %
51-60	78	11.8 %
61-70	26	3.9 %

Table 2: Leiomyoma Location In Uterus

Location Of Leiomyoma	Number Of Cases(N=660)	Percentage(%)
Intramural	425	64.3 %
Sub mucosal	77	11.6 %
Sub serosal	56	8.4 %
More than one location	102	15.4 %

**Table 3: Multiplicity of Leiomyoma**

Multiplicity	Number Of Cases (N=660)	Percentage (%)
Single	440	66.6 %
Multiple	220	33.3 %

Multiplicity of leiomyoma



Table 4: Pattern of Endometrium in Uterine Leiomyoma

Endometrial Pattern	Number Of Cases (N=660)	Percentage(%)
Proliferative endometrium	380	57.5%
Secretory endometrium	150	22.7 %
Atrophic endometrium	70	10.6 %
Simple endometrial hyperplasia	36	5.4 %
Disordered proliferative endometrium	14	2.1 %

Table 5: Associated Pathology with Uterine Leiomyoma

Associated Pathology	Number Of Cases(N=660)	Percentage (%)
Chronic cervicitis	412	62.4 %
Adenomyosis	119	18.0 %
Endometrial polyp	62	9.3 %
Chronic endometriosis	10	1.5 %
Cervical polyp	04	0.6 %
Carcinoma cervix	01	0.15 %
Endometriosis	01	0.15 %
No Pathology	51	7.7 %

DISCUSSION: Hysterectomy is the most common modality of treatment for uterine leiomyoma, adenomyosis, prolapse and dysfunctional uterine bleeding (DUB) [4]. The Leiomyoma is benign tumor

of smooth muscle seen in women of reproductive age group [3,5]. In our study age of the patient ranged from 21-70 years. Maximum number of patients were in the age group of 41-50 years (53.6%) this findings

was similar to the study done Bhatta Sushama Et al.[6,7,8] According to the location in uterine wall leiomyomata are classified as intramural, submucosal or subserosal and single or multiple with different sizes. In our study we found that the 66.6 % of leiomyoma were single similar findings were seen in study done by Gowri M et al [7] who found 71% single leiomyoma in hysterectomy specimens. In contrast multiple leiomyoma was common in a study by Begum S et al [8]. Intramural leiomyoma were most common location we found in (64 %) cases which is similar with the studies by Bhatta Sushama et al [6] , Gowri M et al 8 and Abraham J et al 10. In their studies intramural leiomyoma was observed in 48% and 61.5% cases respectively.9 In the present study proliferative endometrium was the most common endometrial pattern associated with leiomyoma seen in 57.5 % patients. This finding was in accordance with the study by Bhatta Sushama et al [6] Chethana M et al 10. In our study endometrial proliferative pattern (SHE, Proliferative phase and disordered endometrial proliferation) seen collectively in 65 % cases. These endometrial pattern are possibly due to hyperestrogenic state. Atrophic endometrium was observed in 10.6 % patients similar to other studies 10. Atrophic changes results from mechanical effects of leiomyoma on endometrium, especially seen in submucosal leiomyoma and involutional changes in the uterus in postmenopausal women. Among the associated uterine pathologies with leiomyoma chronic cervicitis was the most common pathology seen in 62.4 % cases. Bhatta Sushama et al [6] and Taludker et al [11.] also found chronic cervicitis as the most common cervical pathology in their study. adenomyosis was observed in 18 % cases, which is in similar with other studies Bhatta Sushama et al [6,12,13] . Associated malignant lesions (carcinoma cervix) was observed in one cases (0.15 %) in our study which were present in the patient of age group of >40 years. Bhatta Sushama et al [6] observed malignant lesions comprised serous cystadenocarcinoma of ovary (1.2 %) and carcinoma of cervix (0.6 %). Gowri M et al [7] observed granulosa cell tumor of ovary in 0.4% and mucinous and serous cystadenocarcinoma in 1.6% patients.

CONCLUSION: Uterine leiomyoma is a benign tumor of reproductive age group. Intramural leiomyoma is the most common location. Associated

adenomyosis and cystic ovaries suggest hyperestrogenic state. Occasional cases are associated with malignancy. Hence histopathological diagnosis is essential to identify various changes in leiomyoma and diagnose other pathologies associated with leiomyoma.

References:

1. Adelman S, Benson CD, Hertzler JH, Surgical lesion of the ovary in infancy & childhood, *Gynecol Obstet* 1975; 141 : 219-222
2. Prof. Univ. Dr. Brăila Mihai , Kamal Kamal Constantin, Clinical-Epidemiological, Imagistic, Histological And Immunohistochemical Study Of Ovarian Mucinous Tumours University Of Medicine And Pharmacy Craiova
3. Crum CP. Body of uterus and endometrium. In: Kumar V, Abbas AK, Fausto N, Eds. *Robbins and Cotran Pathologic Basis of Disease*. 7th ed. Philadelphia: Saunders, 2004:1089-90
4. Gupta S, Manyonda I. Hysterectomy for benign gynecological diseases. *Current Obstet Gynaecol* 2006;16:147-53
5. Ackerman, Gull B, Karlsson B, Milsom I, Granberg S. Factors associated with endometrial thickness and uterine size in random sample of postmenopausal women. *Am J Obstet Gynecol* 2001;185(2):386-91
6. Bhatta Sushama 1 , Bhandari Sunita2 , Osti Bidur Prasad1 Histopathological study of Uterine Leiomyoma in Hysterectomy Specimens *ACCLM* 2017;3(2):16-20]
7. Gowri M, Mala G, Murthy S, Nayak V. Clinicopathological study of uterine leiomyomas in hysterectomy specimens. *Journal of Evolution of Medical and Dental Sciences* 2013;2(46):9002-9.
8. Begum S, Khan S. Audit of leiomyoma uterus at Khyber Teaching Hospital, Peshawar. *J Ayub Med Coll* 2004;16(2):46-9
9. Abraham J, Saldanha P. Morphological variants and secondary changes in uterine leiomyomas. Is it important to recognize

- them? Int J Biomed Research. 2013;4(12):254-64.
10. Chethana M, Kumar HML, Munikrishna M. Endometrial changes in uterine leiomyomas. J Clin Biomed Sci 2013;3(2):72-79.
11. Talukder SI, Haque MA, Huq MH, Alam MO, Roushan A, Noor Z et al. Histopathological analysis of hysterectomy specimens. Mymensingh Med J 2007;16(1):81-84.
12. Rizvi G, Pandey H, Pant H, Chufal SS, Pant P. Histopathological correlation of adenomyosis and leiomyoma in hysterectomy specimens as the cause of abnormal bleeding in women in different age groups in the kumaon region- A retrospective study. J of Midlife health 2013;4:27-30.
13. Rani S.V.R, Thomas S. Leiomyoma, a major cause of abnormal uterine bleeding. J of Evolution of Medical and Dental Sciences. 2013; 2:2626-30.