



CLINICOPATHOLOGICAL STUDY OF UTERINE LEIOMYOMAS IN HYSTERECTOMY SPECIMENS AT TERTIARY CARE HOSPITAL IN PUNE, MAHARASHTRA

Pathology

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ABSTRACT

Introduction: Leiomyomas are commonly encountered benign uterine neoplasms. The present study was taken up to study pathological changes in leiomyomas. **Objectives:** To study the age wise distribution, clinical manifestations, different locations of leiomyoma, secondary changes within leiomyomas and various endometrial changes in hysterectomy specimens with leiomyomas. **Method:** The present is a retrospective study. The clinical features and histopathological features of uterine leiomyoma in hysterectomy specimens were studied during period of January 2016-May 2016. The study was conducted in Department of Pathology, SKNMC&GH, Pune. Gross and microscopic examination with respect to type, location, secondary changes, Endometrial status were studied in hysterectomy specimens with leiomyoma. The observations were tabulated and correlated. **Results:** Total 115 hysterectomy specimens with uterine leiomyomas were studied. The most common age for presentation of leiomyomas was between 41-50 years of age that is 58(50.4%). Clinically Menorrhagia was seen as most common manifestation in 74 cases (64.3%) Grossly, Most common location of leiomyomas was intramural that is 53 cases(46.1%). Microscopically, secondary changes occurring within leiomyomas were present in 25.2%. Out of these, 24 cases (82.8%) had hyalinization, which was the commonest secondary change. Microscopic examination of endometrium revealed 58 cases (50.4%) showing proliferative type endometrium. Associated adenomyosis was seen in 32 cases (27.8%) out of total 115 cases of leiomyomas. **Conclusion:** According to the study results, it is concluded that the studied population showed higher frequency of uterine leiomyoma during the patients 3rd and 4th decade, with higher frequency of leiomyomas were located in the intramural and subserosal anatomical regions

KEYWORDS

Hysterectomy, Endometrium , Leiomyoma

INTRODUCTION:

Hysterectomy is the most common major gynecological operation in the world¹

The commonest pathology in such hysterectomies are uterine fibroids/(leiomyomas). Many times hysterectomies are also performed for dysfunctional uterine bleeding, in which leiomyoma is a common cause⁽²⁾. Leiomyomas synonymously called as fibromyomas, fibroids or myomas are the commonly encountered benign uterine neoplasms in women of reproductive age group accounting for 5-20%^[3,4,5]. Leiomyomas need hormonal milieu for their growth and maintenance as evidenced by the molecular studies. It states that leiomyomas exhibit more estrogen receptors than normal myometrium^[3,4,5]. Unopposed estrogenic stimulation manifests commonly as endometrial proliferative phase or hyperplasia^[5,6,7]. Leiomyomas are usually asymptomatic, however depending on their size, location and hormonal effects, the commonest clinical manifestations are menorrhagia, dysmenorrhoea, pain in abdomen, mass abdominal mass and other mass effects^[8]. Symptomatic leiomyomas need urgent attention either by myomectomy in younger women desirous of retaining the childbearing function. In elderly women hysterectomy still remains the traditional modality of treatment^[9,10]. Leiomyomas also undergo secondary changes due to estrogenic stimulation^[5,6,7]. There are a few studies to elaborate on these pathological changes, hence the present study was undertaken to study these changes

Objectives of the study:

1. To study the age wise distribution of patients of leiomyoma
2. To study clinical manifestation in the patients with leiomyoma
3. To study different location of leiomyomas in hysterectomy specimens.
4. To study secondary changes within leiomyoma.
5. To study the various endometrial changes, in all hysterectomy specimens with co-existing leiomyomas.

MATERIAL & METHODS

The present is a retrospective study. The clinical features and

histopathological features of uterine leiomyoma in hysterectomy specimens are studied. The study period was from January 2016-May 2016. The study was conducted in Department of Pathology, SKNMC&GH, Pune.

A brief clinical data will be obtained from patient records in whom hysterectomy has been performed for the management of uterine leiomyomas. Following the receipt of hysterectomy specimens were grossed properly and kept for fixation in 10% formalin for 24 hours. A detailed examination was performed with respect to location, secondary changes like cystic change, red degeneration, calcification etc. The status of endometrium was studied. Further, sections from the fibroid and corresponding or adjacent endometrium and myometrium were obtained and slides were stained with hematoxylin and eosin.

The sections were then examined and findings were noted. Informed consent of the patient for the present study is not required as specimens are selected from routine surgical pathology samples received in the laboratory.

RESULTS:

The most common age for presentation of leiomyomas was between 41-50 years of age that is 58(50.4%). Average age was 44.3 years

Table No -1 Table Showing Age Wise Distribution Of Cases

Age	Cases	%
31-40	42	36.5%
41-50	58	50.4%
51-60	8	7.0%
61-70	7	6.1%
>70 yrs	115	100.0%

Table No -2 Table Showing Symptom Wise Distribution Of Cases

CLINICAL FEATURES	Cases	Percentage
Menorrhagia	74	64.3%
Pain Abdomen	46	40.0%
Dysmenorrhoea	30	26.1%

Clinically, patients were seen to have had more than one clinical feature.

Menorrhagia was seen in 74(64.3%) followed by pain abdomen in 46 (40.0%) and dysmenorrhoea in 30 (26.1%).

Table No -3 Table Showing Location Wise Distributions Of Cases Of Leiomyomas

Location	Cases	%
Subserosal	18	15.7%
Submucosal	11	9.6%
Intramural	53	46.1%
More than 1 location	33	28.7%

Grossly, Most common location was intramural that is 53 cases(46.1%) followed by subserosal - 18 cases (15.7%) , followed by 11 cases (9.6%) of submucosal fibroids. 33(28.7%) cases had leiomyomas in more than one location

Secondary Changes Within Leiomyomas

Microscopically, secondary changes occurring within leiomyomas were present in 25.2%.Out of these, 24 cases (82.8%) had hyalinization, which was the commonest secondary change.

Table No -4 Table Showing Secondary Changes In Leiomyomas

Secondary changes	cases	%
Present	29	25.2%
Absent	86	74.8%
Total	115	100.0%
Cases in which secondary changes were present		
Hyaline degeneration	24	82.8%
Red degeneration	2	6.9%
Calcification	0	0.0%
Hemorrhage	2	6.9%
Cystic change	1	3.4%
Total	29	100.0%

Endometrial Changes

Microscopic examination of endometrium revealed 58 cases (50.4%) showing proliferative type endometrium.

Table No -5 Table Showing Associated Endometrial Status

Endometrial status	cases	%
Proliferative Type	58	50.4%
Secretory type	23	20.0%
Cystic Atrophy	11	9.6%
Hyperplasia without atypia	13	11.3%
Hyperplasia with atypia	0	0.0%
Polyp	10	8.7%
	115	100.0%

Associated adenomyosis was seen in 32 cases (27.8%) out of total 115 cases of leiomyomas.

DISCUSSION:

Hysterectomy for leiomyoma is the most common gynaecological procedure performed for various malignant and benign conditions like leiomyoma, adenomyosis, pelvis inflammatory disease, abnormal uterine bleeding, endometriosis, uterine prolapse which account for major hysterectomies^[10].

Present study had greater frequency between 31-50 years(86.9%) similar to studies by Ashraf T et al(11), Begum S et al(8)and MangalaGowri et al(17)whereas in contrast Hafiz R et al(12) observed that affected females were a decade lesser(20 to 40 years of age).

In the present study,.Menorrhagia was seen as most common complaint that is in 74cases (64.3%) followed by pain abdomen in 46 cases (40.0%) and dysmenorrhea in 30 cases (26.1%). This is similar to the study byMangalaGowri et al(17),Begum S et al(8) and Jaiswal S et al(13).In the present study most of the leiomyomas were intramural(46.1%), similar to studies by Chhabra S et al(15), MangalaGowri et al(17),Begum S et al(8) and Rosario et al(14).

Microscopically, secondary changes occurring within leiomyomas were present in 25.2%.Out of these, 24 cases (82.8%) had hyalinization, which was the commonest secondary change in our study. This is similar to studies by BegumS et al(8),MangalaGowri et

al(17)and Persaud et al(16).Degenerative changes in leiomyomas occur due to inadequate blood supply which may result in hyalinisation.

In the present study, proliferative phase and simple hyperplasticendometrium together accounted for 61.7% and were the commonest endometrial changes due to hyper estrogenic states seen in association with uterine leiomyomas, in accordance with studies by Rosario et al(16), Purandare et al(18), Sanyal et al(19).

Dual pathology of adenomyosis and leiomyomas were noted in 27.8% of patients in present study similar to studies by Denligdish et al(20) and Rizvi et al(21).

CONCLUSION:

The most common age group of women undergoing hysterectomy due to leiomyoma was between 31-50 years of age that is women of reproductive and perimenopausalage. On studying specimens of hysterectomies grossly and microscopically, secondary degenerative changes were seen in 25.2% cases of which Hyaline degeneration was commonest.

The most common location of leiomyoma in the study were intramural fibroids and menorrhagia was the most common clinical feature.

Conflict of interest -Nil

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