



Original Research Article

Study of endometrial changes in fibriod uterus

Mandar Zade¹, B S Padmapriya^{1,*}, Volga Harikrishnan¹, Chitra Srinivasan¹¹Dept. of Pathology, Saveetha Medical College and Hospital, Chennai, Tamil Nadu, India

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ABSTRACT

Introduction: Uterine Leiomyoma is perhaps the most common tumour in females. They are benign smooth muscle neoplasms that might occur singly or multiple. Leiomyoma the most common indication for hysterectomies in pre-menopausal women, are also commonly known as fibroids or fibromyomas. These benign growths are usually etiologically related to hormonal excess or imbalance.

Aim: To study the Endometrial changes in Leiomyoma of the uterus, and also to study the correlation of various parameters (Age distribution, Clinical presentation, Location of tumour, Count, Size) in hysterectomy specimens with Leiomyoma.

Materials and Methods: This was a retrospective series study, where hysterectomy specimens with Leiomyoma, were sent for the histopathological study to the Pathology department of Saveetha Medical College (tertiary care hospital), conducted from June 2018 to December 2018.

Result: The most common Endometrial change in Leiomyoma of the uterus, was found to be the Proliferative Endometrium (52%). The average (mean) age was found to be 47 years and the most common age group was 41-50 years (62%). The most common clinical presentation was Abnormal Uterine Bleeding (54%). The most common site for the Leiomyoma was found to be Intramural location (81%), and mostly Single (67%), most lesions being less than 5 Centimetres (81%) in size.

Conclusion: Proliferative endometrium was the predominant endometrial change in Leiomyoma of uterus. Hysterectomy is the most common procedure in the treatment and management of Leiomyoma of the uterus, where occasional cases of endometrial hyperplasia may go unchecked. Hence histopathological study is a must for confirmed diagnosis and optimal treatment.

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1. Introduction

The Leiomyoma also known as fibroids, it is a benign smooth muscle tumour that very rarely becomes cancerous (0.1%). They are perhaps the most common tumour in pre-menopausal women. They can occur at any site or organ, but the more common forms occur in the uterus, small bowel, and the oesophagus. Uterine Leiomyomas are basically spherical masses of smooth muscle cells that can vary greatly in size, ranging from a few millimetres to many centimetres in diameter.

Leiomyomas are sharply circumscribed, discrete, round, firm, grey -white tumours. In frequently they can occur in

the myometrium or the uterine ligaments.

Leiomyoma of the uterus are the most common indication for hysterectomy all around the world. Uterine Leiomyoma can result in masses associated with a variety of obstetric and gynaecological problems, the most commonly occurring of which are the Abnormal Vaginal Bleeding (including abnormal Menstrual bleeding), Urinary frequency, Asymptomatic pelvic mass, Fetal malpresentation etc.

Most Leiomyomas have normal karyotypes but approximately 40% have simple chromosomal abnormalities. Mutations in the *MED12* gene has been identified in up to 70% of the cases.

* Corresponding author.

E-mail address: dpriyaashok2010@gmail.com (B. S. Padmapriya).

2. Objectives

To study and analyse the various Endometrial changes in Leiomyoma of the uterus in hysterectomy specimens, under the following headings :

1. Proliferative Endometrium
2. Secretory Endometrium
3. Simple Hyperplastic Endometrium
4. Atrophic Endometrium

To study and analyse the various parameters in patients with Leiomyoma according to their:

1. Age distribution
2. Clinical presentation
3. Location of tumour
4. Count
5. Size of tumour

3. Materials and Methods

The present study was conducted in the department of Pathology, Saveetha Medical College and Hospital, over a period of 6 months from June 2018 to December 2018. A total of 63 hysterectomy specimens with or without salpingo - oophorectomy with Leiomyoma sent for Histopathological examination were used for the above study. Brief demographic and clinical data of patients were collected for the same.

4. Result

The result for the Endometrial changes are summarised in Table 1. In the table it shows, the most common change in the Endometrium in Leiomyoma of the uterus, was found to be the *Proliferative Endometrium* (52%), The second most common finding was the *Secretory Endometrium* (25%), followed by the *Atrophic Endometrium* (13%) and the *Simple Hyperplasia of Endometrium* (3%).

Table 1:

S. No	Endometrial Changes	Subtype	Frequency	Percentage
1	Proliferative phase	Normal	33	52.38%
		Disordered	4	6.34%
2	Secretory phase	Early	13	20.63%
		Mid	1	1.58%
		Late	2	3.17%
3	Simple Hyperplasia		2	3.17%
4	Atropic		8	12.69%
		Total	63	100%
			studies	

The age of the patients lied between 32-70 years, the average (mean) being 47 years and the most common

Table 2:

S. No	Age Group	Frequent	Percentage
1	31-40	11	17.46%
2	41-50	39	61.90%
3	51-50	7	11.11%
4	61-70	6	9.52%

age group was 41-50 years (62%), mostly consisting of premenopausal women.

The most common clinical presentation was *Abnormal Uterine Bleeding* (67%), followed by *Incidental finding in USG* (21%), followed by *Utero Vaginal Prolapse* (11%), and *Post menopausal bleeding* (1%).

Table 3:

S. No	Clinical Presentation	Frequency	Percentage
1	Abnormal Uterine Bleeding	42	66.66%
2	Fibroid(USG finding)	13	20.62%
3	Utero-Vaginal Prolapse	7	11.09%
4	PostMenopausal Bleeding	1	1.58%

Table 4:

S. No	Location	Frequency	Percentage
1	Intramural	51	80.95%
2	Subserosal	8	12.69%
3	Submucosal	4	6.34%

The most common site for the Leiomyoma was found to be *Intramural location* (81%), followed by *Subserosal location* (13%) and *Submucosal location* (6%).

Most of the lesions were *Single* (67%). most lesions being *less than 5 Centimetres* (81%) in size.

5. Discussion

Leiomyoma being the commonest benign tumour in middle aged females, is one of the major cause of hysterectomies all around the world.

This study mainly focuses on studying the various Endometrial changes associated with Leiomyoma of uterus, conducted at Department of Pathology, of Saveetha Medical College and Hospital, Chennai.

This is a retrospective study of 63 cases, with Leiomyoma of uterus, undergoing hysterectomies irrespective any of other factors.

Comparing our case setting to that of Anusha Babu Rajendran¹ et al, and with that of Mannem Chethana² et al, the most common type of endometrium associated with a Leiomyoma was P roliferative Endometrium observed in 44.41% (147 cases), and 33 % in the next one,

matching with our most common finding of Proliferative Endometrium, observed in 52% (33 cases) of total 63 cases.

Comparing our case setting with that of L. DELIGDISH AND M. LOEWENTHAL³ et al, and of Mangala Gowri⁴ et al, there was total endometrial glandular atrophy in 17 (58%) of the 30 cases, and 69.1% putting together the proliferative endometrium and simple hyperplastic endometrium in the next one this being their most common finding respectively, contrasting to our most common finding of Proliferative Endometrium in 33 (52%) out of the 63 cases studied.

Among all the studies carried out on endometrial changes, the most commonly found change was found to be Proliferative Endometrium, with a few exceptions.

The most common age group in all the studies was found to be 41-50 years. Comparing our case study with that of others like Siddegowda MS⁵ et al, Ghazala Rizvi⁶ et al, Mangala Gowri⁴ et al, their study findings are identical to ours, where our most common presenting age group was 41-50 years.

Most common clinical presentation in our study was Abnormal Uterine Bleeding (this includes all from the PALM-COEIN classification), these findings are in concurrence with similar to Rather.⁷ et al and Vaidya S. et al⁸ who also found Abnormal Uterine Bleeding to be the most common clinical presentation.

The most common location for the benign lesion in our study was found to be Intramural (80.95%), this is in agreement with the observations by Siddegowda MS⁵ et al, Anusha Babu Rajendran¹ et al, Mannem Chethana² et al, Mangala Gowri⁴ et al.

The size of the tumour varies from 0.3 to 22 centimetres in diameter, where the most frequent size group was less than 5 centimetres (80.95%).

6. Conclusion

Proliferative endometrium was the predominant endometrial change in leiomyoma of uterus. Hysterectomy is the most common procedure in the treatment and management of Leiomyoma of the uterus, where occasional cases of endometrial hyperplasia may go unchecked. Hence histopathological study is a must for confirmed diagnosis and optimal treatment.

7. Source of funding

None

8. Conflict and interest

None

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Author biography

Mandar Zade IInd MBBS Student

B S Padmapriya Tutor

Volga Harikrishnan Associate Professor

Chitra Srinivasan Professor

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