



A CLINICO PATHOLOGICAL STUDY OF LEIOMYOMA UTERUS IN A TERTIARY CARE REFERRAL HOSPITAL AND RESEARCH INSTITUTE

Obstetrics & Gynaecology

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ABSTRACT

Background And Objectives: Leiomyoma of the uterus is the most common benign tumor of the uterus and also most common pelvic tumor in women. Surgery has been the main mode of therapy for the leiomyomas. Recent trend has been towards non surgical approaches.

This study is an attempt to analyse the clinico pathological spectrum in cases of leiomyoma of the uterus in Vani Vilas Hospital and Bowring and Lady Curzon Hospital to know the pattern of presentation, pathological co relation with type of fibroid and endometrial and ovarian changes.

Methods: A cross sectional study of 200 cases of leiomyoma uterus was made in Vani Vilas Hospital and Bowring and Lady Curzon Hospital attached to Bangalore Medical College and Research Institute, Bangalore, from November 2011 to August 2013. The cases were selected by random sampling. Detailed history, gynecological examination and relevant investigations including ultrasonography was done.

Results: Leiomyoma is commonly found in the third decade in 58% cases. Most common mode of presentation is menstrual disturbances in 78% amongst which menorrhagia seen in 58% cases, intramural fibroids are the most common variety accounting for 60.8%, endometrial pattern was proliferative in 68%, cystic ovaries noted in 12% patients and adenomyosis in 19% cases.

Interpretation And Conclusion: Leiomyoma commonly affects women of childbearing age, most common in 3rd decade. Most common presentation is menstrual disturbances. Intramural fibroid is the most common variety. Presence of proliferative endometrium, adenomyosis and cystic ovaries are all indicative of hyperestrogenic state which is associated with development of leiomyomas.

KEYWORDS

Leiomyoma, degeneration, proliferative endometrium, menorrhagia.

INTRODUCTION

Leiomyoma of uterus is the most common type of benign tumor of uterus, and also most common pelvic tumor in women.¹ They account for 5-20% of all women in reproductive age group.² Symptomatology depends on number, size and location of tumor, although few leiomyomas are asymptomatic and progress slowly.

Due to their wide spectrum of clinical symptoms like menstrual irregularities, pelvic pain, infertility they impose health burden on women and economic costs to the society. They assume importance particularly in our country as they are one of the important cause for anaemia secondary to menorrhagia which is common in leiomyoma uterus. The unopposed estrogenic stimulation manifests commonly as endometrial proliferative phase or hyperplasia.³

Surgery has for long been the main mode of therapy for the myomas. For women who have completed childbearing, hysterectomy is chosen as an option. For women who wish to retain the uterus for future pregnancies or other reasons myomectomy is an option.

Recent trend has been, towards non - surgical approaches like GnRH hormone analogs/agonists, RU 486,⁴ or selective uterine artery embolization,⁵ radiofrequency thermal ablation,⁶ magnetic resonance guided ultrasound.^{7,8}

OBJECTIVES

To analyse clinico pathological spectrum of 200 cases of leiomyoma uterus admitted to Vanivilas Hospital & Bowring and Lady Curzon hospital attached to Bangalore Medical College and Research Institute to know the

1. Clinical spectrum
2. Pathological correlation with type of fibroid, endometrial and ovarian changes.

METHODOLOGY

A hospital based cross sectional study of 200 cases of leiomyoma uterus was done in the OBGY department in Vani Vilas Hospital and Bowring and Lady Curzon Hospital attached to Bangalore Medical College and Research Institute, Bangalore from November 2011 to August 2013. The cases are selected by random sampling.

Detailed history noted, demographic details noted, presenting complaints, menstrual complaints, and detailed menstrual history noted. Obstetric history noted, past surgical and medical history noted. Thorough clinical and gynecological examination done. Routine blood investigations done. Ultrasonography of abdomen and pelvis done to know the size of uterus, number and location of myomas,

endometrial thickness, condition of bilateral adnexa.

The diagnosis of fibroid uterus was made by clinical examination in majority of cases, considering the presenting complaints, menstrual history, firm mass in the hypogastric region, transmitting movement from cervix to mass and vice versa.

Endometrial biopsy was done in select patients to rule out any endometrial pathology especially in elderly patients and in those with thick endometrium on ultrasonography. The type of surgery was chosen depending on the age of the patient, parity, her wish for future fertility and associated pathology.

At laparotomy: Size of uterus; number and location of fibroids, condition of tubes and ovaries were noted.

In cases posted for myomectomy, tubal patency test using diluted methylene blue was done in those cases who wished for future fertility. The ovaries were conserved in cases undergoing hysterectomies unless associated with pathology, cysts and in elderly patients.

The removed specimen was cut to inspect the cavity and seedling fibroids. Histopathological study of the specimen was done to confirm the lesion, to note for degenerative changes, type of endometrium. Other associated conditions like adenomyosis and changes in cervix and adnexa were noted. The statistical evaluation was done with SPSS software for Windows, Version 20.0, IBM Corp, Chicago, IL

RESULTS

Leiomyoma accounts to maximum gynaecology admissions in our institute, and forms the most common indication for hysterectomy. 200 cases were selected by random sampling. Leiomyomas are most commonly seen in women of child bearing age. The mean age was 37 years. The youngest patient was 22 years, and the eldest was 52 years old. 58% cases were in 3rd decade of age. It was common in parous women - 44% were para 3, 7% were nulliparous in our study. The interval between last delivery and development of symptoms in most of the cases was long - 39% cases had last child birth 16-20 years back, and in 18% cases had more than 20 years back.

Many presenting complaints were overlapping. Menstrual complains was most common complain noted in 78% patients of which 58% had menorrhagia most commonly. Metrorrhagia in 11% cases and polymenorrhoea in 9%. Anaemia noted in 46% cases.

Dysmenorrhoea as a chief complain seen in 28% cases. Pain abdomen in 36% cases, mass per abdomen in 13% cases, urinary symptoms in

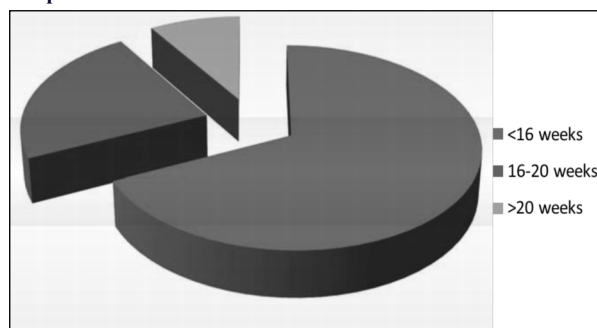
12% cases. Primary infertility in 8% cases. Other symptoms like post coital bleeding, mass per vaginum, white discharge per vagina were observed in 3% cases.

71.5% patients underwent total abdominal hysterectomy (TAH) with or without unilateral/bilateral salpingo-oophorectomy. 9% cases underwent myomectomy, Total laparoscopic hysterectomy (TLH) in 5% cases, Laparoscopic assisted vaginal hysterectomy (LAVH) in 3% cases, Non Descent Vaginal Hysterectomy (NDVH) in 9% cases and 2% had vaginal hysterectomy.

Table 1 : Various surgeries performed

Type of surgery	Number of patients	Percent %
Total abdominal hysterectomy	82	41
Total abdominal hysterectomy with bilateral salpingo – oophorectomy	53	26.5
Total abdominal hysterectomy with unilateral salpingo oophorectomy	8	4
Myomectomy	18	9
Total laparoscopic hysterectomy	10	5
Laparoscopic assisted vaginal hysterectomy	6	3
Non Descent Vaginal Hysterectomy	18	9
Vaginal hysterectomy associated with UV prolapse	4	2
Diagnostic laparoscopy	1	0.5

Graph 1- Size of fibroid uterus in studied cases



In our series size of the leiomyoma uterus varied from sub centimeter to 34 weeks gravid uterus size. About 70% were of the uterine size <16 weeks, 22% between 16-20 weeks uterus size and huge fibroids of >20 weeks size in 8% of the patients. The heaviest fibroid weighed 2.4 kgs.

Intramural fibroids were the commonest variety comprising about 60.8% of the cases, 11% submucous, 5% were broad ligament fibroids, all were pseudo broad ligament fibroids, 7% sub serous fibroids, 6.2% cervical fibroid. Number of fibroids varied from 1 to 18.

Myxoid degeneration was the most common degeneration noted in 5% cases followed by hyaline degeneration in 3% cases, calcareous degeneration in 2%, cystic degeneration in 1%. No sarcomatous change seen in our study.

Table 2: Histopathological pattern of endometrium

Endometrium pattern	Percentage
Proliferative	68
Secretory	14
Simple hyperplasia	6
Cystic Glandular Hyperplasia	4
Complex hyperplasia	2
Atrophic	5
Inconclusive	1

Histopathological pattern of endometrium was studied. It showed proliferative endometrium in 68% cases, secretory type in 14%, endometrial hyperplasia in 8% cases (simple and complex), cystic glandular hypertrophy in 4%, atrophic endometrium 5% cases.

The associated pathology in the adnexa and cervix was studied, Chronic cervicitis was seen in 45% of the cases, Adenomyosis was found in 19% cases, Cystic ovaries in 12% cases. A variety of cysts were noted like follicular cysts, luteal cysts, serous cysts. Chocolate

cysts seen in 3%, PID in 8% of the cases.

DISCUSSION

The incidence of leiomyoma in our study is high in 3rd decade around 58%, which is similar to other studies by Bhaskar Reddy⁹ *et al* which showed 50% cases in 3rd decade, Usha¹⁰ *et al* showed 48.9% cases in 3rd decade.

The incidence of leiomyoma was high among the multiparous women in few other studies. Our study had 44% women who were para 3 and above comparable with other studies of Bhaskar Reddy⁹ *et al* which showed 46.5 % cases in para 3 and above and another study by Usha¹⁰ *et al* showed 31 % cases of para 3 and above. Our finding of leiomyomas being common in parous women is probably due to early age at marriage and long gap between the last child birth and development of symptoms.

Menstrual complains were most common presenting symptoms. Since ours is not an infertility center, cases presenting with infertility or recurrent pregnancy loss was less (8%). Urinary symptoms like frequency, retention in 12% cases, frequently noted in cervical fibroid. The most common variety was intramural fibroids in our study around 60.8%; comparable to other studies - Usha¹⁰ *et al* -77%; Chhabra¹ *et al* -47%. Though the incidence of cervical fibroid is low; 0.6% by Tiltman¹² *et al*, our study showed 6.2%.

The histological pattern of endometrium was proliferative type in 68% cases in our study which is similar to other studies like Madhu Udawat¹¹ *et al* (68%), Chhabra¹ *et al* (40%). This indicates the hyper estrogenic state associated with fibroids. Secretory pattern seen in 14% of the cases which is comparable to other studies like Madhu Udawat¹¹ *et al* -22%, Chhabra¹ *et al* -31.2%.

Cystic ovaries seen in 12% in our study, similar to study by Madhu Udawat¹¹ *et al* - 14%. Adenomyosis noted in 19% similar to 15% by Madhu Udawat¹¹ *et al*. The association with cystic ovaries and adenomyosis also indicate hyperestrogenism.

CONCLUSION

Leiomyoma is most common benign tumor of the pelvis, commonly affecting women of child bearing age, most common in third decade; they cease to grow after menopause. Intramural leiomyomas is the most common variety. The proliferative endometrium was commonly reported. Presence of proliferative endometrium, adenomyosis and cystic ovaries all are indicative of hyper estrogenic state which is also associated with development of leiomyoma.

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