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Original Research Article

Leiomyoma of Uterus - A Clinico Pathological Analysis

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Abstract

Leiomyomas of the uterus are benign tumours that occurs due to overgrowth of smooth muscle and connective tissue present in the uterus. A clinical study of 50 cases of fibroid uterus was made in the Sambhram Medical College and Research Institute, from January 2018 to June 2018. The cases are selected by random allocation. In the present study, leiomyomas are most commonly seen in the women of child bearing age, most commonly occurring in the 3rd decade. Menstrual disturbances were seen in 71% of cases, Dysmenorrhea was seen in 22% of the cases. White discharge per vaginum was seen in 10 % of the cases. Pain abdomen was seen in 40% of the cases. Presence of a mass was complained in 23% of the cases.Urinaryproblemswerenoticedin25%ofthecases and infertility in 25% of cases.Intramural fibroid were the commonest variety comprising about 66% of the cases, 10% submucous, and 8% cervical. The present study shows, proliferative endometrial in 55% of cases, secretary changes were noted in 20%, atrophic endometrial occurred in 15%.

Key words: Leiomyoma, Uterus, Clinico Pathological Analysis.

INTRODUCTION

Leiomyomas of the uterus are benign tumours that occurs due to overgrowth of smooth muscle and connective tissue present in the uterus. Uterine leiomyomas are the most common benign gynecologic tumors. They primarily affect women of reproductive age, and the estimated incidence of fibroids is over 70% by 50 years of age [1-4]. The radiologic characteristics of these neoplasms are shown in the images below.

Uuterine leiomyomas may rarely transform into malignant degeneration to become a sarcoma. The exact number of malignant transformation is very difficult to determine, because leiomyomas are very common, whereas malignant leiomyosarcomas are rare [5]. The incidence of malignant degeneration is very less.

Gross description

- Sharply circumscribed, round, firm, grayish white, "raw silk" and whorled cut surface
- Often shells out
- Bulging and trabeculated cut surface
- Usually within myometrium (intramural), may be submucosal or subserosal
- May be multiple
- Sampling: sample myxoid areas extensively to rule out myxoidleiomyosarcoma; sample all leiomyomas that lack the classic gross appearance of leiomyomas and 3 largest tumors

Microscopic (histologic) description

- Whorled (fascicular) pattern of smooth muscle bundles separated by well vascularized connective tissue
- Smooth muscle cells are elongated with eosinophilic or occasional fibrillar cytoplasm and distinct cell membranes
- May develop areas of degeneration if large including hyaline or mucoid change, calcification, cystic change or fatty metamorphosis
- Usually noninfiltrative, thick walled arteries throughout and cleft-like spaces
- May have extensive hyaline necrosis if protrudes into endometrial cavity
- Variable lymphocytes and mast cells

- Usually less than 5 mitotic figures per 10 high power fields in most mitotically active area, no significant atypia
- Rarely has focal skeletal muscle differentiation or tubules/glands
- Post lupron treatment: initially edema and necrosis, then hyalinization and mild lymphocytic infiltrate
- Smooth muscle proliferations with unusual growth patterns: disseminated peritoneal leiomyomatosis; benign metastasizing leiomyoma; intravenous leiomyomatosis; lymphangioleiomyomatosis

OBJECTIVE

A clinico pathological analysis of leiomyoma of uterus

METHODOLOGY

A clinical study of 50 cases of fibroid uterus was made in the Sambhram Medical College and Research Institute, from January 2018 to June 2018. The cases are selected by random allocation. Size of uterus, number and situation of fibroids, condition of tubes and ovaries were noted. The removed specimen was cutanteriorly in them idline and near the cornuto inspect the cavity and seedling fibroids. The specimen was forwarded to histo-pathological examination.

RESULTS

Table-1: Incidence of Leiomyoma in relation to age

Age (in years)	Percentage
21-30	10
31-40	60
41-50	25
50+	5

In the present study, leiomyomas are most commonly seen in the women of child bearing age, most commonly occurring in the 3rd decade.

Table-2: Incidence of various symptoms in the present study

Symptoms	Percentage
Menstrual disturbances	71
Dysmenorrhea	22
White discharge	10
Pain abdomen	40
Mass per abdomen/ vagina	23
Urinary symptoms	25
Infertility	25

Menstrual disturbances were seen in 71% of cases, Dysmenorrhea was seen in 22% of the cases. White discharge per vaginum was seen in 10 % of the cases. Pain abdomen was seen in 40% of the cases. Presence of a mass was complained in 23% of the cases. Urinary problems were noticed in 25% of the cases and infertility in 25% of cases.

Table-3: Incidence of various types of Leiomyomas

Type of fibroid	Percentage
Intramural	66
Multiple	12
Submucous	10
Cervical	08
Subserous	03
Broad ligament	01

Intramural fibroid were the commonest variety comprising about 66% of the cases, 10% submucous, 8% cervical.

Table-4: Incidence of histopathological pattern of endometrium

Endometrium pattern	Percentage
Proliferative	55
Secretory	20
Atrophic	15
Cystic Glandular Hyperplasia	06
Simple hyperplasia	04

The present study shows, proliferative endometrial in 55% of cases, secretary changes were noted in 20%, atrophic endometrial occurred in 15%.

DISCUSSION

In the present study, leiomyomas are most commonly seen in the women of child bearing age, most commonly occurring in the 3rd decade. Menstrual disturbances were seen in 71% of cases, Dysmenorrhea was seen in 22% of the cases. White discharge per vaginum was seen in 10 % of the cases. Pain abdomen was seen in 40% of the cases. Presence of a mass was complained in 23% of the cases. Urinary problems were noticed in 25% of the cases and infertility in 25% of cases. Intramural fibroid were the commonest variety comprising about 66% of the cases, 10% submucous, and 8% cervical. The present study shows, proliferative endometrial in 55% of cases, secretary changes were noted in 20%, atrophic endometrial occurred in 15%.

Leiomyomas are the most common uterine neoplasm and are composed of smooth muscle with varying amounts of fibrous connective tissue. When leiomyomas enlarge, they will acquire their blood supply, leading to different types of degeneration: hyaline degeneration, calcification, cystic degeneration, and red degeneration. They are classified as submucosal, intramural, and subserosal. Even though most of them are non-symptomatic, patients may

present with abnormal uterine bleeding, pressure on adjacent organs, pain, infertility, or a palpable abdominal-pelvic mass. MRI is the most preferred imaging technique for diagnosis of leiomyomas.

On MRI, nondegenerated leiomyomas look like well-circumscribed masses of decreased signal intensity and cellular leiomyomas can have higher signal intensity and demonstrate enhancement on contrast material–enhanced images. The differential diagnosis includes adenomyosis, solid adnexal mass, focal myometrial contraction, and uterine leiomyosarcoma. For patients with only symptoms, medical or surgical treatment may be indicated. MRI also has a role in treatment of leiomyomas by assisting in surgical planning and monitoring the response to medical therapy [6].

Western women are commonly affected by leiomyomas. They have myomas diagnosed at an earlier age, a higher incidence and prevalence of disease, evidence of more severe disease, and different patterns of myomas. These women are 3 times more likely to have a hysterectomy for leiomyomas. There is some evidence that different genes and genetic polymorphisms may underlie the severe phenotype of leiomyomas in African American women, including increases in aromatase, signal transduction genes, and transcription factors among African American women compared with whites [7, 8].

Leiomyomas are the most common tumors in the US. The prevalence of leiomyomas is at least 3-4 times higher among African American women than in us women. Leiomyomas are benign tumors that arise in any part of the uterus under the influence of local growth factors and hormones. These tumors cause more morbidity for females and they are considered to be the most common indication for hysterectomy in the world. Uterine myomas cause heavy or abnormal uterine bleeding, pelvic pressure, miscarriage and preterm labor. Surgery has been the gold standard for the treatment of leiomyomas and has typically consisted of either hysterectomy or myomectomy [9].

CONCLUSION

Uterine Leiomyomas are major disease and are commonly treated with hysterectomy. Better understanding the diversity of disease in both patho-physiology and clinically will lead to best treatment strategies in the long-term. We aim for the time when evidence suggests surgery will be clearly indicated for some women and lifestyle modification is adequate for others.

REFERENCES

1. Cao, M., Qian, L., Zhang, X., Suo, X., Lu, Q., Zhao, H., & Suo, S. (2017). Monitoring leiomyoma response to uterine artery embolization using diffusion and perfusion indices from diffusion-weighted imaging. *BioMed research international*, *2017*.
2. Lethaby, A., & Vollenhoven, B. (2011). Fibroids (uterine myomatosis, leiomyomas). *BMJ clinical evidence*, *2011*.
3. Pérez-López, F. R., Ornat, L., Ceausu, I., Depypere, H., Erel, C. T., Lambrinoudaki, I., ... & Rees, M. (2014). EMAS position statement: management of uterine fibroids. *Maturitas*, *79*(1), 106-116.
4. Khan, A. T., Shehmar, M., & Gupta, J. K. (2014). Uterine fibroids: current perspectives. *International journal of women's health*, *6*, 95.
5. Kusunoki, S., Terao, Y., Ujihira, T., Fujino, K., Kaneda, H., Kimura, M., & Takeda, S. (2017). Efficacy of PET/CT to exclude leiomyoma in patients with lesions suspicious for uterine sarcoma on MRI. *Taiwanese Journal of Obstetrics and Gynecology*, *56*(4), 508-513.
6. Murase, E., Siegelman, E. S., Outwater, E. K., Perez-Jaffe, L. A., & Tureck, R. W. (1999). Uterine leiomyomas: histopathologic features, MR imaging findings, differential diagnosis, and treatment. *Radiographics*, *19*(5), 1179-1197.
7. Ishikawa, H., Reierstad, S., Demura, M., Rademaker, A. W., Kasai, T., Inoue, M., & Bulun, S. E. (2009). High aromatase expression in uterine leiomyoma tissues of African-American women. *The Journal of Clinical Endocrinology & Metabolism*, *94*(5), 1752-1756.
8. Pan, Q., Luo, X., & Chegini, N. (2007). Genomic and proteomic profiling I: leiomyomas in African Americans and Caucasians. *Reproductive Biology and Endocrinology*, *5*(1), 34.
9. Sabry, M., & Al-Hendy, A. (2012). Medical treatment of uterine leiomyoma. *Reproductive sciences*, *19*(4), 339-353.