



ijcrr

Vol 04 issue 07

Category: Research

Received on:27/11/11

Revised on:12/01/12

Accepted on:20/02/12

STUDY OF SYMPTOMATOLOGY OF UTERINE LEIOMYOMAS WITH DEGENERATIVE CHANGES

Ramesh B.H¹, Shashikala P²

¹Department of Pathology, Raichur Institute of Medical Sciences, Raichur

²Department of Pathology, SS Institute of Medical Sciences, Davanagere

E-mail of Corresponding Author: rameshpath@rediffmail.com

ABSTRACT

A clinical and pathologic study of 314 patients with uterine leiomyomas revealed no significant relationship between the presenting symptoms and degenerative changes in the tumors. Some form of degeneration was demonstrated in 44% of specimens. Correlation of symptomatology with the type of degenerative change showed that the hyaline change was the commonest type associated with each symptom or group of symptoms; whereas the other types of degeneration occurred at random. The commonest associated pathology contributing to symptomatology includes adenomyosis (39.22%), followed by follicular cyst in 24.11% of patients and endometrial hyperplasia in 57 cases.

Keywords: Leiomyoma; degenerative changes; symptomatology.

correlate any specific symptoms associated with any particular type of degeneration.

INTRODUCTION

Uterine leiomyomas is the most common benign neoplasm of the female reproductive tract^{1,2}. Though uterine leiomyomas are common, it is difficult to obtain much information regarding clinical and pathological aspects of it in Indian literature³. The exact incidence is difficult to assess as most of the patients do not come to the hospital unless and until there is presence of progressive symptoms of some duration⁴. Unfortunately their symptomatology continues to be variable⁵. Leiomyomas can undergo various secondary changes including hyaline degeneration, cystic change, myxoid, infection, necrosis, calcification and rarely ossification^{6,7}. This is a clinicopathological study of degenerative changes in leiomyomas and to

MATERIAL AND METHOD

This is a prospective study consisting of 314 cases of leiomyomas, which included three myomectomies collected over a period of 2 yrs at J.J.M Medical college, Davanagere, Karnataka. The clinical details were extracted from the records of patients treated. All tissues were embedded in paraffin and stained with hematoxylin and eosin.

RESULTS

Of the 314 specimens studied, associated degenerative changes were seen in 136 leiomyomas (43.3%). Hyaline changes in the commonest form of degeneration were seen in 131 (41.71%) of leiomyomas. Grossly the mean size of these leiomyomas was 4.8cms.

Cystic change was seen in 3.5% of cases. Myomas with mucoid degeneration (1.91%) also result in cystic change. Fatty and Myxoid change was seen in 2 cases each (0.64%).

Out of 7 patients (2.22%) with calcareous degeneration, 4 were detected grossly and 3 showed microscopic foci of calcification.

Leiomyoma with haemorrhage was observed in 2 cases, which included a case of red degeneration, occurred in absence of pregnancy. Necrosis was found in 2 cases (0.64%).

Leiomyoma with infection and infarction was detected microscopically in one case each (0.32%). There was no case of sarcomatous degeneration in the present study.

Menorrhagia was the only representing symptom in 67 patients, but 50% of these showed no evidence of degeneration. Menorrhagia associated with abdominal mass occurred in 108 patients, and in 57.4% of these had some form of degeneration. Of the 40 patients with pain abdomen, 15 patients presented with degenerative changes, when pain associated with other symptoms degenerative change occurred in 56.3% of 110 patients. Of the 10 patients with abdominal mass, 6 patients showed degenerative changes and when the complaint of mass was associated with other symptoms, degenerative change was found in 58.3%.

Mass/Vagina was the presenting complaint in 33 cases and White discharge per vagina(WDPV) in 24 cases of which 3 cases each had some form of degenerative changes. Of the 11 patients presenting with pressure symptom like Bladder disturbances and backache, 2 patients showed degenerative changes. Of the 5 patients with fever, 3 patients showed degenerative changes.

Proliferative phase was found in 150 cases (48.23%) followed by secretory phase in 95 cases (30.54%), endometrial hyperplasia in 57 cases (18.34%) and atrophic in only 9 cases.

Adenomyosis was associated with leiomyomas in 122 (39.22%) patients followed by follicular cyst in 75 patients (24.11%).

DISCUSSION

Degenerative changes was observed in 43.31% of leiomyomas in our study. Persaud & Arjoon (1970) found secondary changes in 65% of leiomyomas while Reddy & Malathy(1963) found secondary changes present in all leiomyomas (325 cases)^{4,7}.

Hyaline change (41.71%) is the commonest form of degeneration seen in leiomyomas^{4,7,8,9,10}. The mean size of leiomyomas with hyaline change was 4.8 cms, which is in accordance with Shaw (1971), states that some degrees of hyaline degeneration present in all leiomyomas more than 4 cms diameter¹¹.

Persaud & Arjoon⁴ (1970) & Reddy & Malathy (1963,⁷ reported low incidence of fatty change^{1,6}, similar to the low incidence of present study(0.64%).

Reddy & Malathy (1963, 2.5%), Torpin et al (1942, 2.4%) & Persaud & Arjoon (1970, 7.0%) found low incidence of calcification in their respective studies^{4,7}.

Cystic change in present study (3.5%) is comparable to Norris & Zaloudek (1981, 4%) & Persaud & Arjoon^{7,9} (1970, 4%).

Myomas with mucoid degeneration (1.91%) is low, when compared to Persaud & Arjoon⁷ (1970) who reported higher incidence of 5.36%. Myxomatous degeneration in leiomyomas is considered to be rare, while Persaud & Arjoon (1970) reported higher incidence of 12%⁷.

Leiomyoma with haemorrhage was reported in 2 cases in our study, while Norris & Zaloudek (1981)⁹ observed in 11% of cases.

Rosario pinto (1968, 1.2%), Persaud & Arjoon (1970, 3.3%) and Reddy & Malathy (1963, 2.5%) found low incidence of red degeneration

without pregnancy^{4,7,8}. Harshmohan et al (2003) reported 0.55% of incidence of ossification in leiomyomas¹⁰.

Sarcomatous change in leiomyomas is rare. Incidence of leiomyomas with this change varies from 0.04% to 0.5% in different studies done over many decades^{7,12}.

The symptomatology continues to be variable. Many patients presented with more than one symptom¹³.

Menorrhagia (46.07%) was the commonest clinical symptom as noted by various studies^{7, 8, 13}. Menorrhagia does not occur in every case, but when the growths are deep intramural or submucous, it is a constant symptom. Increased blood loss often cause severe anaemia. Excessive bleeding may be from increased surface of the endometrium or from thickened polypoidal endometrium. Multiple intramural growths by hindering effective uterine contractions result in prolonged & profuse loss¹². Dysmenorrhoea due to irregular uterine contractions¹² found in 22.29% of cases.

Mass per Abdomen in the present study in comparable to Rosario pinto (1968, 17.7%) studies⁸. White discharge per vagina (WDPV) in our study in majority of cases was caused by excessive mucus secretion from the hyperplastic endometrium¹².

Bladder disturbances (1.27%) were due to cervical fibroids or those arising from lower part of the body getting impacted into the pelvic cavity elongate & distort the urethra & displace the bladder upwards¹².

Majority of patients with fatty change, calcification, cystic change, mucoid & myxoid change do not cause any symptoms and are diagnosed only after removal by operation or at postmortem¹².

Red degeneration is considered to be more common in pregnancy when it may produce severe pain often accompanied by vomiting and pyrexia¹². It is however difficult to give an

accurate estimate of the incidence of red degeneration in pregnancy since surgical intervention is not always required and pathologic confirmation cannot therefore be obtained⁷. Red degeneration in fibroid is usually associated with pregnancy though absence of pregnancy does not exclude red degeneration⁴. It would thus appear that red degeneration is not as severe in the non-pregnant as in the pregnant patient⁷.

Adenomyosis, follicular cyst and endometrial hyperplasia were some of the commonly associated pathological lesions which may also contribute to the symptomatology^{3,8}.

CONCLUSION

Hyaline change was the commonest degenerative change associated with each symptom or group of symptoms; whereas the other types of degeneration occurred at random. Associated pathology may also contribute to the symptomatology. Majority of leiomyomas being symptomless and especially when small & progress slowly. There appears to be no relationship between the presenting symptoms and the type of degeneration. Symptomatology and severity usually depend on the size and location of leiomyomas rather than degenerative changes.

ACKNOWLEDGEMENT

Authors acknowledge the immense help received from the scholars whose articles are cited and included in reference of this manuscript. The authors are also grateful to authors/editors/publishers of all those articles, journal and books from where the literature for this article has been reviewed and discussed.

REFERENCES

1. Parker WH. Etiology, symptomatology and diagnosis of uterine myomas. *Fertil Steril.* 2007;87:725-736.

2. Iftikhar R. Modes of presentation of leiomyoma of uterus. *Pakistan Journal of Surgery*. 2008; 13: 117-20.
3. Novak R.E, Jones G.S, and Jones H.W. *Novaks Text Book of Gynecology*. 7th Edition. 1966:319-354.
4. Reddy D.B and Malathy P.M. Fibromyoma uterus. *J. of Obstet. & Gynecol. of India*. 1963; 13:54-60.
5. Chabra S, and Ohwri Neenu. Leiomyomas of uterus. A clinical study. *J. of Obstet. & Gynaecol. Of India*. 1993; 43: 436-439.
6. Bhattacharya N, Banerjee AK, Sengupta J. Ossification of leiomyoma. *J Indian Med Assoc*. 1998;96:99
7. Persaud V, Arjoon PD. Uterine leiomyoma: incidence of degenerative change and a correlation of associated symptoms. *Obstet Gynecol*. 1970;35:432-6.
8. Pinto RY. Uterine fibromyomas. *J. of Obstet. & Gynaecol*. 1968; 18:101-107.
9. Zaloudek C and Norris H.J. Mesenchymal Tumours of uterus. *Blaunstein's Pathology of Female Genital Tract*. 3rd Edit b. Springer-verlag. New York. 1987; 374-402.
10. Mohan H, Punia RS, Kumar S, Jain P and Handa U. Ossification in uterine leiomyomas. *The internet Journal of Gynecology and Obstetrics*. 2003; 2.
11. Padubidri VG and Daftary SN. Howkins & Browne. *New Growths of uterus*. Shaws text book of Gynaecology, 10th Edn. : Churchill livingstone, New Delhi. 1989;399-427.
12. Masani MM. *New growths of cervix and uterus*. Text book of Gynaecology. 6th Edition. Bombay Popular. Prakashan. 1971;313-417.
13. Vollenhoven BJ, Lawrence AS, Healy DL. Uterine fibroids: a clinical review. *Br J Obstet Gynaecol* 1990; 97:285-298