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Original Research Paper

Pathology

CLINICOPATHOLOGICAL STUDY OF HYSTERECTOMY SPECIMENS PRESENTING WITH MENORRHAGIA IN A TERTIARY CARE CENTRE

Guntur Roda Sumanlatha — Assistant Professor, Department of Pathology, Andhra Medical College/King George Hospital, Visakhapatnam, Andhra Pradesh, India.

Sunil Kota — Postgraduate, Department of General Surgery, ASRAM Medical college, Eluru, Andhra Pradesh, India.

Sumalatha Kasturi* — Professor, Department of Pathology, Chalmeda Anandrao Institute of Medical Sciences, Karimnagar, Telangana , India. *Corresponding Author

ABSTRACT

Background: Hysterectomy is the most commonly performed gynecological surgery throughout the world. Few studies have been performed describing the pathological findings in hysterectomy specimen examining the gross findings and microscopic features. This study was under taken to indentify different types of pathologies in hysterectomy specimens and to correlate clinical findings with pathological features.

Methods: In the present study, five hundred and forty four cases were studied over a period of one year. Surgical specimens were formalin fixed and the tissue was adequately processed for histopathological examination. Sections were stained routinely with hematoxylin and eosin stain and examined under light microscope.

Results: Of the 544 cases, 52.75% cases were encountered in the age group of 40-49 years which was the most common age group. The most common pathology identified was leiomyoma in myometrium.

Conclusions: The present study provides a fair insight into the histological patterns of lesions in hysterectomy specimens in our institutions. A wide range of lesions were enconuntered when hysterectomy specimens were subjected to histological examination. Though the histopathological ananlysis correlates well with the clinical and gross diagnosis, a few lesions were also encountered as incidental findings. Hence, it is mandatory that every hysterectomy specimen should be subjected to detailed gross and histopathological examination to ensure proper postoperative management of patients.

KEYWORDS : Hysterectomy, Leimyoma, Menorrhagia

INTRODUCTION

Uterus, a vital reproductive organ is subjected to many benign and malignant diseases. Many treatment options are available including medical and conservative surgical treatments but hysterectomy still remains the most common gynaecological procedure performed worldwide.[1] It is the definitive cure for many of its indications which include dysfunctional uterine bleeding, fibroids and gynaecological cancers.[2]

Histopathological examination of hysterectomy specimens carries diagnostic and therapeutic significance. Prevalence of uterine pathologies varies from nation to nation and from region to region within the nation. Hence, this study was conducted with a view to get insight into the patterns of lesions in hysterectomy specimens in a tertiary care centre.

METHODS

This is a prospective study conducted in the Department of Pathology, Andhra Medical College, Visakhapatnam and Chalmeda Anand Rao Institute of Medical sciences, Karimnagar over a period of one year from January 2018 to December 2018. The study material comprised of hysterectomies received in our departments for a period of one year. The clinical information and the relevant investigations of the patients who underwent hysterectomy during this period were obtained from the histopathological requisition forms and clinical case sheets. The hysterectomy specimens received by the Department of Pathology were properly labelled, numbered and fixed in 10% buffered formalin. After a detailed gross examination of the specimens, multiple bits were taken from representative sites, processed and paraffin blocks were made. The blocks were sectioned and stained routinely with hematoxylin and eosin. A detailed microscopic examination of the stained slides was carried out and the lesions were given a histopathological diagnosis.

RESULTS

A total of 544 cases were studied. The hysterectomies were distributed over a wide age range of 20 to 77 years. Of these 544 cases, 52.75% cases were encountered in the age group of 40 - 49 years which is the most common age group (Table 1).

Table 1: Age-wise Distribution Of Uterine Lesions.

Age (years)	No. of cases (Total=544)
20-29	20
30-39	166
40-49	287
50-59	53
60-69	17
70-79	1

Table 2: Distribution Of Various Types Of Uterine Lesions.

Histopathology	No. of cases (total=544)	Percentage
Leiomyoma	322	59.20%
Adenomyosis	98	18.02%
Leiomyoma+ adenomyosis	89	16.36%
Endometrial polyp	17	3.13%
Endometrial carcinoma	6	1.10%
Endometrial hyperplasia	3	0.55%
Hydatidiform mole	3	0.55%
Invasive mole	3	0.55%
Choriocarcinoma	2	0.37%
Endometrial stromal tumor	1	0.18%

The most common pathology encountered was leiomyoma (Figure 1a and 1b, Figure 2) in 322 cases (59.20%) followed by adenomyosis (Figure 3) in 98 cases (18.02%). 89 cases (16.36%) showed a combination of both leiomyoma and adenomyosis. Other cases included endometrial polyps in 17 cases (3.13%), 6 cases of endometrial carcinoma (Figures 4, 5 and 6) (1.10%), 3 cases of simple endometrial hyperplasia (0.55%), 3 cases of hydatidiform mole (0.55%) (Figure 7), 3 cases of invasive mole (0.55%) (Figures 8 and 9) and 2 cases of choriocarcinoma (0.37%) (Figures 10 and 11). We have also encountered a very rare and interesting case of endometrial stromal tumor (Table 2) in our study.

Table 3: Mismatch Diagnoses Of Uterine Lesions.

Clinical diagnosis	Histopathological diagnosis	No. of cases (total-18)
Fibroid	Adenomyosis	11
Uterine sarcoma	Adenomyosis	1
Leiomyosarcoma	Leiomyoma with secondary changes	1
Adenomyosis	Leiomyoma	2
AUB with simple endometrial hyperplasia	Endometrial adenocarcinoma	1
Fibroid	Endometrial polyp	1
Endometrial carcinoma	Endometrial stromal nodule	1

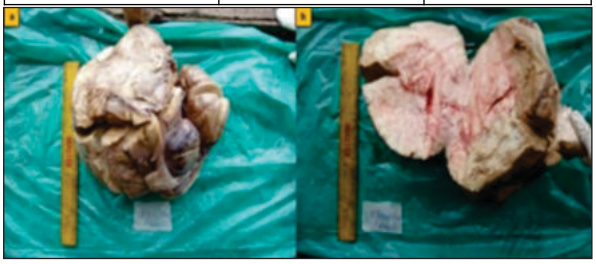

Figure 1: (a) Gross photograph of uterine leiomyoma; (b) cut section showing large interstitial leiomyoma.

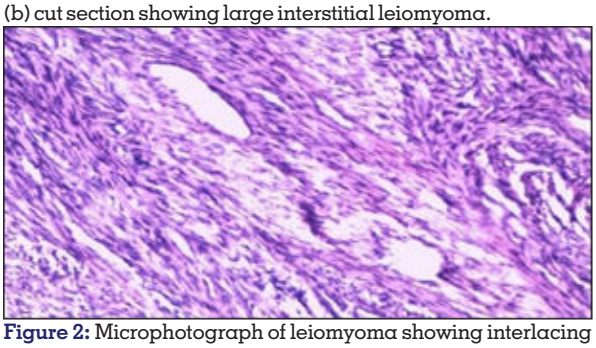

Figure 2: Microphotograph of leiomyoma showing interlacing fascicles of bland monomorphic spindle (smooth muscle) cells; H and E; 100X.

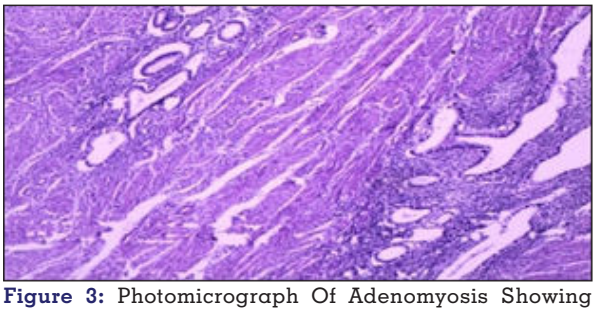

Figure 3: Photomicrograph Of Adenomyosis Showing Endometrial Glands And Stroma Are Seen In The Myometrium. H and E; 40X.

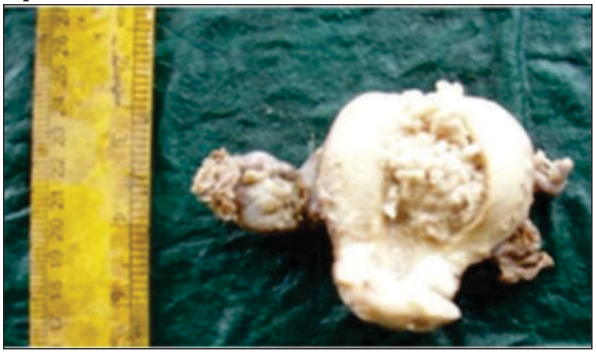

Figure 4: Gross Photograph Of Endometrial Carcinoma Showing Polypoidal Greyish White Growth Filling The Endometrial Cavity.

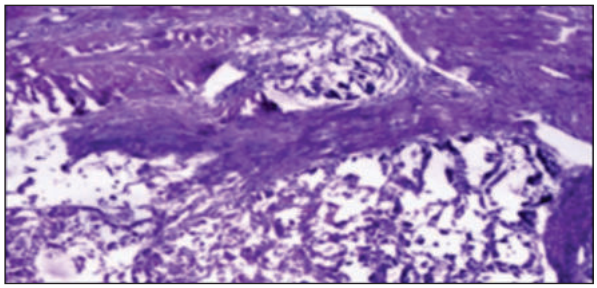

Figure 5: Photomicrograph of endometrioid type endometrial carcinoma showing myometrial invasion. H and E; 100X.

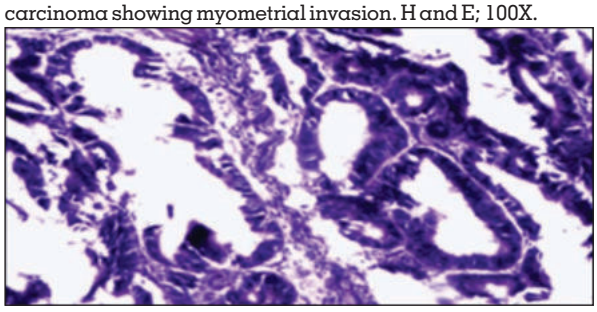

Figure 6: photomicrograph of endometrioid type endometrial carcinoma showing glands lined by atypical cells and the stroma is almost absent. H and E; 400x.

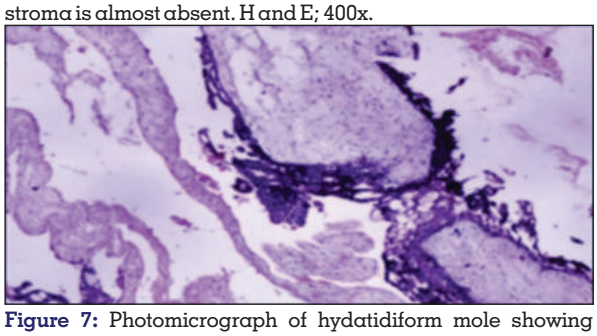

Figure 7: Photomicrograph of hydatidiform mole showing trophoblastic hyperplasia with circumferential and haphazard arrangement around the individual villi. Also showing edematous villi with cistern formation; H and E;40X.

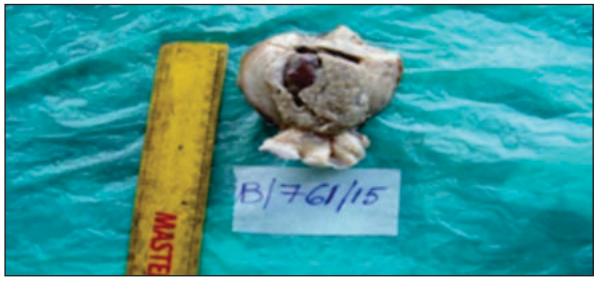

Figure 8: Gross photograph of invasive mole showing hemorrhagic grey brown mass adherent to the uterine wall with surrounding thickened gestational endometrium.

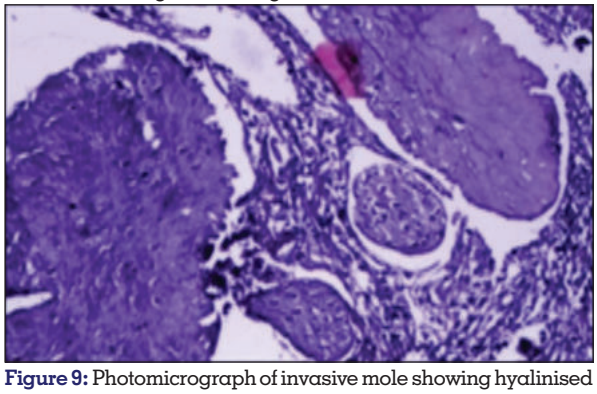

Figure 9: Photomicrograph of invasive mole showing hyalinised villi seen permeating the myometrium; H and E; 100x.

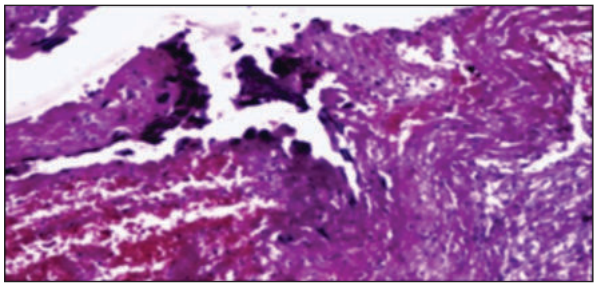

Figure 10: Photomicrograph of choriocarcinoma showing proliferating trophoblastic cells with Hemorrhage and necrosis; H and E; 100X.

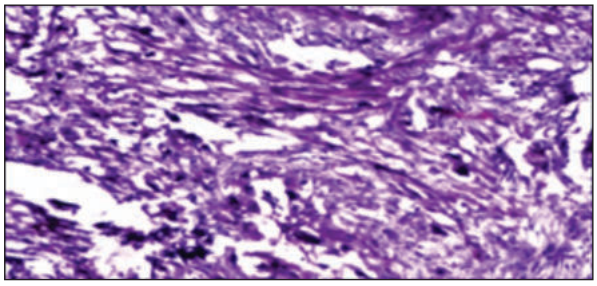

Figure 11: Photomicrograph of choriocarcinoma showing trophoblastic tissue with no associated villi and trophoblastic cells shows invasion of the myometrium; H and E; 100x.

DISCUSSION

Hysterectomy is the most commonly performed major gynaecological surgery throughout the world. It is a successful operation in terms of symptomatic relief and patient satisfaction and provides definitive cure to many diseases involving the uterus.[3] Limited data is available in our community regarding histopathological analysis of hysterectomy specimens and relationship between the preoperative clinical indications and pathological diagnoses. This study was conducted to analyze the patterns of lesions in hysterectomy specimens in our institution, correlate the findings with the clinical indications and to compare our findings with those of other workers. The commonest estimated age range of hysterectomy in our study is 40-49 years which is similar to that reported in other studies.[4-6]

The most common clinical indication in our study is fibroid uterus followed by menorrhagia (dysfunctional uterine bleeding or abnormal uterine bleeding). Many studies have reported menorrhagia as the most common clinical indication for hysterectomy whereas others have reported fibroid to be the commonest indication.[3,4,6-10]

The commonest pathology observed in our study is leiomyoma. Uterine leiomyomata are the most common tumors found in women of reproductive age group.[11] The likelihood that leiomyomata will cause symptoms is undoubtedly related to their number, size and location, although it seems equally plausible that myomata may frequently represent an incidental, rather than causal finding.[12] In our study, we found 131 cases of leiomyoma which were discovered post-hysterectomy on gross inspection and later confirmed by histopathology. These accounted for about 1/3rd (31.87%) of the total number of cases of leiomyoma (322+89=411). Most of them were small seedling fibroids ranging in size from 0.5-1.0 cm and also a few bigger fibroids that could not be diagnosed clinically and missed on ultrasound examination. These findings in our study confirmed the significance of a thorough gross examination of all the specimens received which enabled us to observe those lesions that were missed both clinically and radiologically, and establishing a precise diagnosis by means of histopathological examination for prognostication and further management of the patient. Thus, leiomyoma was the most common myometrial lesion observed in our study and the same is true for other studies.[7,10,13]

Adenomyosis is the second most common myometrial pathology in our study. Adenomyosis is rarely diagnosed preoperatively and is still largely under diagnosed as it has no specific symptoms of its own.[14] It is usually diagnosed after hysterectomy by histopathological examination.[15] In the present study, only one case had a preoperative clinical diagnosis of adenomyosis; other cases either presented with menorrhagia or were incidental findings. Many cases in this study revealed the presence of both leiomyoma and adenomyosis. Other studies have also reported this association.[5,6,16,17]

We also encountered 17 cases of endometrial polyps, 3 cases of endometrial hyperplasia, 3 cases of hydatidiform mole and 3 cases of invasive mole.

In India carcinoma and other malignancies of the body of uterus are not as frequently encountered as other gynaecological malignancies.[18] We observed 8 cases of malignant tumors of endometrium (1.47%) which comprised of 6 cases of endometrial carcinoma and 2 cases of choriocarcinoma.

We also studied a very rare and interesting case of endometrial stromal nodule in a 25 year old female which was clinically diagnosed as endometrial carcinoma. Grossly, the endometrial cavity was filled with a polypoidal mass whose cut-section appeared yellowish. Histopathological examination ruled out endometrial carcinoma and proved it to be endometrial stromal nodule which is a benign endometrial stromal tumor.

Of the total 544 cases, there were 18 mismatch cases (3.30%) in which the clinical diagnoses did not match with the final histopathological diagnoses (Table 3). These included 11 cases which were clinically diagnosed as fibroids, but on gross inspection no fibroids could be identified and later diagnosed as adenomyosis on histopathological examination. One case showed a circumscribed intramural nodule on cut-section of uterus which was diagnosed finally as an adenomyoma. We also had a case of adenomyosis which was clinically diagnosed as uterine sarcoma. There was one case which clinically presented with mass per abdomen and was diagnosed provisionally as leiomyosarcoma. On gross inspection, we received a bulky uterus which on cut- section showed a large 20x20 cm mass with focal myxoid areas. Multiple sections taken from the mass examined histopathologically showed features of leiomyoma with areas of hyaline, myxoid change and focal neurilemmoma-like features. Thus it was proved to be a case of leiomyoma with secondary changes and malignancy was ruled out. There were 2 cases which were clinically diagnosed as adenomyosis. Gross examination revealed intramural fibroids of sizes 8x8 cm and 1x1cm (seedling fibroid) respectively, confirmed on histopathology as leiomyomas. There was one case clinically diagnosed as AUB whose endometrial biopsy report was given as simple endometrial hyperplasia. Hysterectomy was done and sent for histopathological examination. Cut section of the uterus showed a thickened endometrium. Histopathologically it was diagnosed as endometrial carcinoma of endometrioid type, invading upto less than half the thickness of the myometrium. We also received a case of fibroid which on cut-section showed an endometrial polyp of size 1x0.5 cm, proved histologically as an adenomyomatous endometrial polyp. All the above cases proved the importance of a thorough gross examination of the specimen received and the significance of histopathology in giving the final diagnosis in relation to the

previous clinical diagnosis, and thus plan further management of the patient.

CONCLUSION

The present study provides a fair insight into the histological patterns of lesions in hysterectomy specimens in our institutions. A wide range of lesions are encountered when hysterectomy specimens are subjected to histopathological examination. Though the histopathological analysis correlates well with the clinical and gross diagnoses, a few lesions are also encountered as incidental findings and mismatch diagnoses. Hence, it is mandatory that every hysterectomy specimen should be subjected to detailed gross and histopathological examination so as to ensure a better postoperative management of the patients.

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Conflict Of Interest: *None declared*

Ethical Approval: *The study was approved by the Institutional Ethics Committee*

REFERENCES

1. Wu JM, Wechter ME, Geller EJ. Hysterectomy rates in the United States 2003. Obstet Gynaecol. 2007;110(5):1091-5.
2. Nausheen F, Iqbal J, Bhatti FA, Khan AT, Sheikh S. Hysterectomy: the patient's perspective. AnnalGynecol. 2004;10:339-41.
3. Jaleel R, Khan A, Soomro N. Clinicopathological study of abdominal hysterectomies. Pak J Med Sci. 2009;25(4):630-4.
4. Adelusola KA, Ogunniyi SO. Hysterectomies in nigerians: histopathological analysis of cases seen in ile ife. Niger Postgrad Med J. 2001;8(1):37-40.
5. Sarfraz T, Tariq H. Histopathological findings in menorrhagia: a study of 100 hysterectomy specimens. Pak J Pathol. 2005;16(3):83-5.
6. Perveen S, Tayyab S. A clinicopathological review of elective abdominal hysterectomy. J Surg Pak. 2008;13(1):26-9.
7. Jamal S, Baqai S. A clinicohistopathological analysis of 260 Hysterectomies. Pak J Pathol. 2001;12(2):11-4.
8. Gupta G, Kotasthane DS, Kotasthane VD. Hysterectomy: a clinic-pathological correlation of 500 cases. Internet J Gynaecol Obstetrics. 2010;14(1):1-6.
9. Sobande AA, Eskander M, Archibong EI, Damole IO. Elective hysterectomy: a clinicopathological review from Abha Catchment Area of Saudi Arabia. West Afr J Med. 2005;24(1):31-5.
10. Shergill SK, Shergill HK, Gupta M, Kaur S. Clinicopathological study of hysterectomies. J Indian Med Assoc. 2002;100(4):238-9.
11. Parker WH. Etiology, symptomatology and diagnosis ofuterine myomas. J Reproductive Med. 2007;87:725-36.
12. Reiter RC, Wagner PL, Gambone JC. Routine hysterectomyfor large asymptomatic uterine leiomyomata: a reappraisal. Obstet Gynecol. 1992;79(4):481-4.
13. Abdullah LS. Hysterectomy: a clinicopathologic correlation. Bahrain Medical Bulletin. 2006;28(2):1-6.
14. Weiss G, Maseelall P, Schott LL, Brockwell SE, Schocken M, Johnston JM. Adenomyosis a variant, not a disease? Evidence from hysterectomised menopausal women in the study of Women's Health Across the Nation (SWAN). Fertil Steril. 2009;91(1):201-6.
15. Shrestha A, Shrestha R, Sedhai LB, Pandit U. Adenomyosis at hysterectomy: prevalence, patient characteristics, clinicalprofile and histopathological findings. Kathmandu Univ Med J. 2012;37(1):53-6.
16. Bukhari U, Sadiq S. Analysis of the underlying pathological lesions in hysterectomy specimens. Pak J Pathol. 2007;18(4):110-2.
17. Talukder SI, Haque MA, Huq MH, Alam MO, Roushan A, Noor Z, Nahar K. Histopathological analysis of hysterectomy specimens. Mymensingh Med J. 2007;16(1):81-4.
18. Cherian A, Surin C, Jacob S, Prabhakar BR. Primary malignancies of the corpus uteri - retrospective five yearanalysis. Indian J Pathol Microbiol. 1995;38:63-72.