

Classification of Uterine and Cervical Tumours: An Observational Research with a Focus on Endometrial Stromal Sarcoma

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Abstract

Aim: The aim of the present study was to broadly categorize the tumours of uterus and cervix and at the same time look into occurrence of rare lesion like endometrial stromal sarcoma.

Methods: The present study was conducted in Department of Pathology, conducted from January 2023 to June 2023. Total 2000 cases of hysterectomy specimens received during the same period were included in the study.

Results: Total 2000 cases were studied, of which 500 (25%) specimens were neoplastic. Of them, 485 (97%) cases were benign & constituted exclusively of leiomyomas. Among 15 malignant lesions, 5 cases were of endometrial stromal sarcoma and rest 10 cases included 06 cases of endometrial carcinoma and 04 cases of cervical carcinoma. The age group most commonly involved by leiomyoma was 36-45 yrs (55% cases of all cases of leiomyoma); that for endometrial carcinoma was 46-55 yrs (50% cases of all cases of endometrial carcinoma); that for cervical carcinoma was 36-45 yrs (50% cases of all cases of cervical carcinoma); and that for endometrial stromal sarcoma was 46-55 yrs (64% cases of all cases of endometrial stromal sarcoma). Thus, it was evident that all lesions are mostly common around perimenopausal age group.

Conclusion: As expected, leiomyomas turn out to be most common neoplasms of uterus and cervix. Though rare, certain lesions like endometrial stromal sarcoma do come across in histopathology and such lesions being known for poor prognosis and recurrences are important to be correctly and timely diagnosed.

Keywords: Tumours of uterus & cervix, Endometrial stromal sarcoma

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Introduction

Tumours of uterus and cervix constitute a major portion of tumours of female genital tract. Most common invasive carcinoma of female genital tract is endometrial carcinoma which accounts for 7% of all invasive cancers in women, excluding skin cancer. [1] The most common age group for malignancy of uterus and cervix is perimenopausal. Uterine sarcomas, rarer than carcinoma, constitute 1% of malignancies of female genital tract and about 5% of total uterine malignancies. [2,3]

ESS are indolent tumours, but can often present with late recurrence and metastasis. [4] Endometrial stromal sarcomas (ESS) constitute around 10% of uterine sarcomas, but only 0.2% of all uterine malignancies. ESS usually present in the peri-menopausal age group, as compared to other uterine malignancies which are more common in

postmenopausal women. [5] They are aggressive in nature and are classified broadly into leiomyosarcoma, endometrial stromal sarcomas and undifferentiated sarcomas. [6]

These tumours are classified as endometrial stromal nodule, low grade endometrial stromal sarcoma and undifferentiated endometrial sarcoma. [7] It is characterized by a recurrent chromosomal translocation, t(7;17)(p15;q21) which causes fusion of two genes, JAZF1 and JJAZ1, thus producing a fusion transcript which has anti-apoptotic properties. [8] The natural history of endometrial stromal sarcoma is characterized by slow clinical progression, repeated local recurrences (in the pelvis, ovary, intestinal wall, other intra-abdominal sites, and anterior abdominal wall), and occasional metastases. [9] ESS are often clinically

misdiagnosed as benign entities like uterine leiomyomas and are usually diagnosed postoperatively, after a histopathological examination of a hysterectomy or polypectomy specimen. [10]

Hence the aim of study was to broadly categorize the tumours of uterus and cervix and at the same time look into occurrence of rare lesion like endometrial stromal sarcoma.

Material & Methods

The present study was conducted in Department of Pathology, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India conducted from January 2023 to June 2023 Total

2000 cases of hysterectomy specimens received during the same period were included in the study.

Methodology

Demographic data of patients were also noted and brief notes of clinical history were taken. The samples were fixed in 10% formalin and were examined grossly taking note of size, colour, consistency, presence of masses, and other relevant details. After routine histopathology processing, sections were prepared, stained with haematoxyline and eosin and examined under microscope. After final reporting, the data were compiled and sorted using Microsoft excel.

Results

Table 1: Distribution of neoplastic lesions

	N%
Neoplastic lesions	500 (25)
Types of neoplastic lesions N=500	
Benign	485 (97)
Malignant other than stromal sarcomas	10 (2)
Endometrial stromal carcinoma	5 (1)

Total 2000 cases were studied, of which 500 (25%) specimens were neoplastic. Of them, 485 (97%) cases were benign & constituted exclusively of leiomyomas. Among 15 malignant lesions, 5 cases were of endometrial stromal sarcoma and rest 10 cases included 06 cases of endometrial carcinoma and 04 cases of cervical carcinoma.

Table 2: Distribution of age group and neoplastic lesions

Age in years	Neoplastic lesions	N (%)
36-55	Leiomyoma	275 (55)
46-55	Endometrial carcinoma	250 (50)
36-55	Cervical carcinoma	250 (50)
46-55	Endometrial stromal sarcoma	320 (64)

The age group most commonly involved by leiomyoma was 36-45 yrs (55% cases of all cases of leiomyoma); that for endometrial carcinoma was 46-55 yrs (50% cases of all cases of endometrial carcinoma); that for cervical carcinoma was 36-45 yrs (50% cases of all cases of cervical carcinoma); and that for endometrial stromal sarcoma was 46-55 yrs (64% cases of all cases of endometrial stromal sarcoma). Thus, it was evident that all lesions are mostly common around perimenopausal age group.

Discussion

Endometrial stromal sarcomas (ESS) constitute around 10% of uterine sarcomas, but only 0.2% of all uterine malignancies. ESS usually present in the peri-menopausal age group, as compared to other uterine malignancies which are more common in postmenopausal women. [11] ESS are often clinically misdiagnosed as benign entities like uterine leiomyomas and are usually diagnosed postoperatively, after a histopathological examination of a hysterectomy or polypectomy specimen. [12] This calls for a repeat surgery for definitive management. ESS

are indolent tumours, but can often present with late recurrence and metastasis. [13] Differentiating endometrial stromal nodule (ESN) from ESS is of utmost importance from the management point of view and is done on the basis of myometrial and/or vascular invasion. The recognition of gross features that could lead to a suspicion of an endometrial stromal tumour versus a leiomyoma is of vital importance, so that extensive sampling can be performed on initial evaluation to rule out a malignancy. [14]

Total 2000 cases were studied, of which 500 (25%) specimens were neoplastic. Of them, 485 (97%) cases were benign & constituted exclusively of leiomyomas. Among 15 malignant lesions, 5 cases were of endometrial stromal sarcoma and rest 10 cases included 06 cases of endometrial carcinoma and 04 cases of cervical carcinoma. The age group most commonly involved by leiomyoma was 36-45 yrs (55% cases of all cases of leiomyoma); that for endometrial carcinoma was 46-55 yrs (50% cases of all cases of endometrial carcinoma); that for cervical carcinoma was 36-45 yrs (50% cases of all cases of cervical carcinoma); and that for

endometrial stromal sarcoma was 46-55 yrs (64% cases of all cases of endometrial stromal sarcoma). Thus, it was evident that all lesions are mostly common around perimenopausal age group. Endometrial stromal tumours (ESTs) are a rare, fascinating and complex subset of mesenchymal uterine neoplasms with heterogeneous morphological, immunohistochemical and genetic features. ESTs constitute 10% of uterine mesenchymal tumours. [15] Approximately 50% of endometrial stromal sarcomas (ESSs) occur in premenopausal women and the majority is detected at stage I of the International Federation of Gynecology and Obstetrics (FIGO). [16] Morphologically, ESTs resemble endometrial stromal cells in the proliferative phase of the menstrual cycle. In 1966 Norris and Taylor attempted to classify ESTs in their seminal manuscript. [17]

Conclusion

As expected, leiomyomas turn out to be most common neoplasms of uterus and cervix. Though rare, certain lesions like endometrial stromal sarcoma do come across in histopathology and such lesions being known for poor prognosis and recurrences are important to be correctly and timely diagnosed.

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