

Original Research Article

# Histopathological Spectrum of Cervical Lesions

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## ABSTRACT:

**Background:** Cervix is easily accessible and susceptible for infections, inflammation and malignancy. Various inflammatory as well as infectious lesions are common in uterine cervix due to vulnerability to sexual trauma and being an easy access to various infections. Cervical cancer is one of the most common cancers in females in India. It can be easily detected by early screening methods.

## Materials and Methods:

This study was done for a period of one year (May 2020 - April 2021) retrospectively. Specimens included were hysterectomy specimens and cervical biopsies. They were fixed in formalin. Representative sections were taken, processed and embedded in paraffin blocks. All types of lesions were analyzed in the Department of Pathology, SSMC, Rewa (M.P.)

## Results:

In the present study 202 cases were studied, which included cervical biopsy as well as total hysterectomy specimens. Most common age group was 36-45years i.e. 36%.

Most common non-neoplastic lesion was chronic cervicitis i.e. 48.5% (97 cases) and most common malignancy was squamous cell carcinoma i.e. 25% (51 cases).

**Conclusion:** This study highlights a wide spectrum of histopathological types of cervical lesions. Adequate cervical screening procedure with follow up along with histopathological examination helps in early diagnosis and management of premalignant and malignant lesions.

**Keywords:** histopathological, spectrum & cervical lesions.

**Study Design:** Observational Study.

**AIM:**

1. To study the spectrum of various cervical lesions.
2. To study the age distribution and identify the frequency of cervical lesions.

**1. INTRODUCTION:**

Cervix is an elongated fibromuscular portion of uterus measuring 2.5-3cm. anatomically it is divided into outer ectocervix (connected to the vagina) and inner endocervical canal. Ectocervix is lined by mature stratified squamous epithelium continuous with the vaginal wall. Endocervix is lined by columnar mucin secreting epithelium. Transformation zone is present at the junction of ectocervix and endocervix.<sup>(1)</sup>

Uterine cervix is gateway to several non-neoplastic and neoplastic gynecological lesions<sup>(2)</sup>. Non- neoplastic lesions include inflammatory lesions (i.e. acute and chronic cervicitis), endometriosis, Nabothian cysts and endocervical polyps<sup>(3)</sup>.

Complete and accurate assessment of cervical lesions relies on 3 methods:

1. Colposcopic assessment.
2. Cervical cytology.
3. Histopathological examination.

This study is done to study the various histopathological lesions of cervix and to assess the frequency of those lesions.

**2. MATERIALS AND METHODS:**

This was a retrospective study conducted in Department of Pathology, SSMC, Rewa (M.P.), over a period of one year (May 2020 - April 2021). Clinical data and gross findings were obtained from the records of the institute. This included a total of 202 specimens of cervix (including cervical biopsies and hysterectomy specimens). Histopathological processing was done and the slides obtained were reviewed.

**Inclusion Criteria:** All Hysterectomy and cervical biopsy specimen

**Exclusion Criteria:**

1. Very tiny tissue piece, examination not possible.
2. Autolyzed or improperly fixed tissue.

**3. RESULTS:**

Table 1. Distribution of number of cases on the basis of type of specimens

TYPE OF SPECIMEN	No. OF CASES	PERCENTAGE
Hysterectomy	102	49.5
Cervical Biopsy	100	48.5
Excluded from study (Inadequate cervical biopsies)	04	2
<b>TOTAL</b>	<b>206</b>	<b>100</b>

In the present study 206 cases were studied over a period of 1 year, amongst which 4 cervical biopsy specimens (2%) were excluded from the study due to inadequate sampling, 102 cases (49.5%) were hysterectomy specimens and 100 (48.5%) cases were cervical biopsy specimens.

Table 2. Distribution of cervical lesions

CERVICAL LESIONS	No. OF CASES	PERCENTAGE
Non-Neoplastic lesions	103	51
Pre-malignant lesions	47	23
Neoplastic lesions	52	26
<b>TOTAL</b>	<b>202</b>	<b>100</b>

Out of the total 202 cases reviewed, 103 cases (51%) were non-neoplastic lesions, 47 (23%) cases were pre-malignant lesions and 52 (26%) were neoplastic lesions.

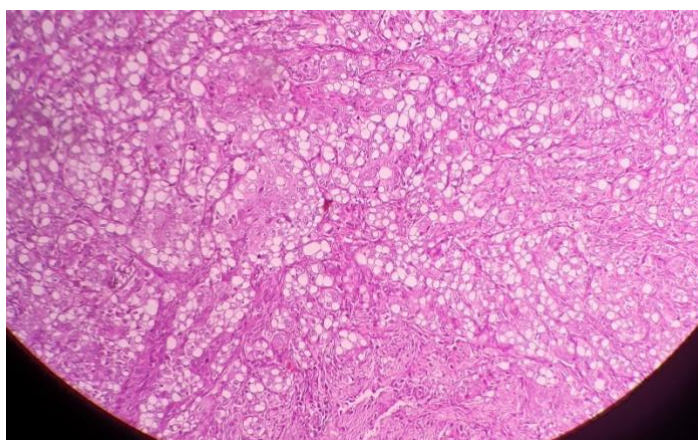


Fig 1. Cervical biopsy of 46yr female; Squamous cell carcinoma (10x; H&amp;E)

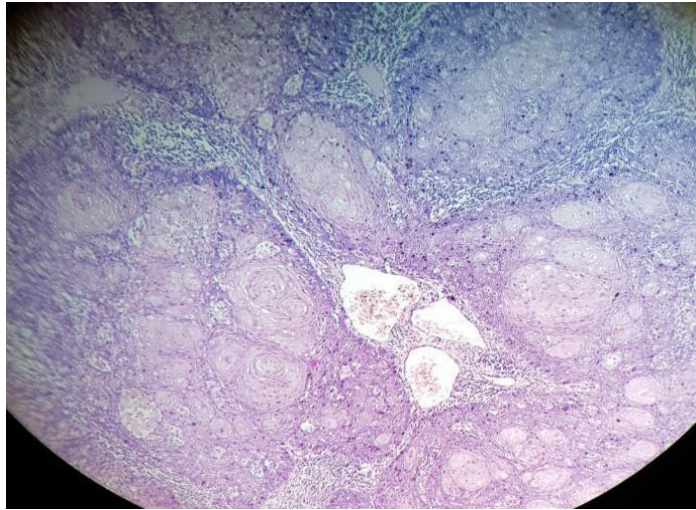


Fig 2. Cervical biopsy of a 55yr female; keratinizing squamous cell carcinoma.(10x; H&E)

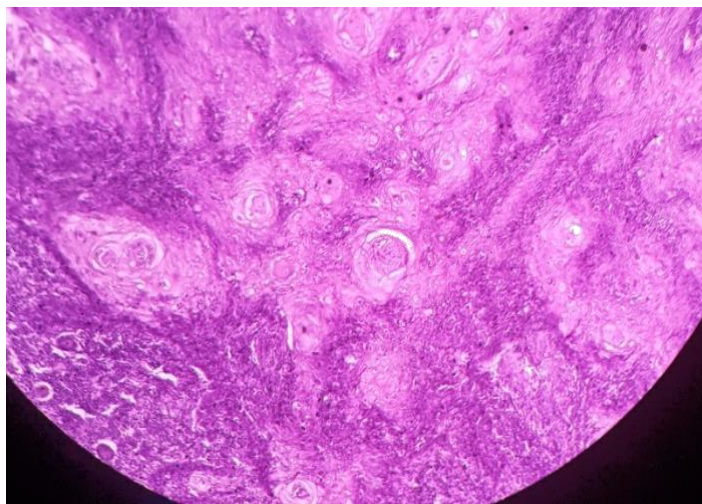


Fig 3. Cervical biopsy of a 59yr female, Keratinizing squamous cell carcinoma. (10x; H&E)

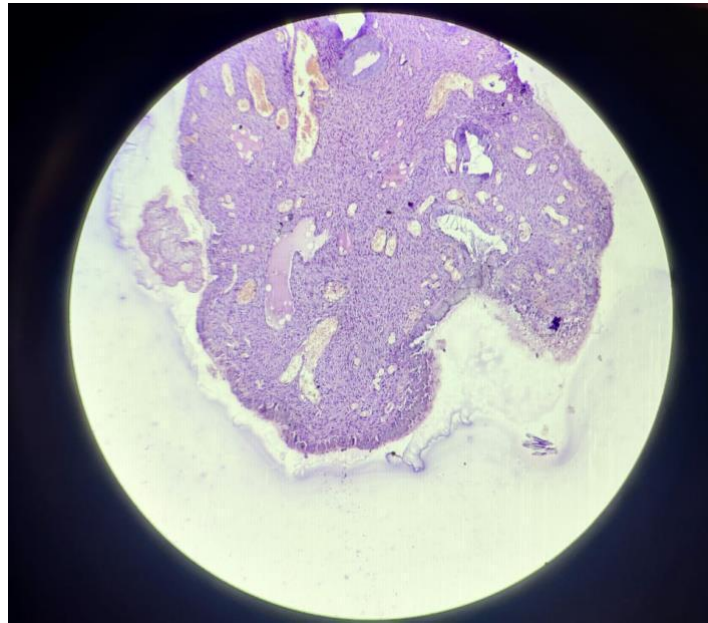


Fig 4. Cervical Biopsy of 37yr female, Endocervical polyp. (10x; H&E)

Table 3. Age-wise distribution of cervical lesions

AGE	No. OF CASES	PERCENTAGE
25-35	24	12
36-45	74*	36
46-55	55*	27
56-65	37	18
66-75	13	6
76-85	3	1
<b>TOTAL</b>	<b>206*</b>	<b>100</b>

\*: including the 4 cases excluded from the study.

Most common age group affected in the present study was 36-45years i.e. 36% (74 cases), followed by 46-55years i.e. 27% (55 cases). Least common age group was 76-85years i.e. 1% (3 cases).

Table 4. Distribution of cervical lesions

CERVICAL LESIONS	No. OF CASES	PERCENTAGE
Chronic cervicitis	76	38
Chronic cervicitis with squamous metaplasia	21	10.5
Endocervical polyp	06	3

LSIL	23	11
HSIL	24	12
Squamous cell carcinoma	51	25
Adenocarcinoma	1	0.5
<b>TOTAL</b>	<b>202</b>	<b>100</b>

As per the present study, most common non neoplastic lesion of cervix was chronic cervicitis, i.e. 48.5% (97 cases), and most common neoplastic lesion was squamous cell carcinoma i.e. 25% (51 cases) and 23% (47 cases) were intra-epithelial lesions.

Table 5. Malignant lesions of cervix

<b>CERVICAL LESION</b>	<b>No. OF CASES</b>	<b>PERCENTAGE</b>
Non-keratinizing squamous cell carcinoma	31	60
Keratinizing Squamous cell carcinoma	20	38
Adenocarcinoma	1	02
<b>TOTAL</b>	<b>52</b>	<b>100</b>

Most common malignant lesion of the cervix as per the present study was squamous cell carcinoma, i.e. 98% (51 cases); out of which 60% (31 cases) were non-keratinizing and rest 38% (20 cases) were keratinizing. 02% (1 case) was adenocarcinoma.

## DISCUSSION:

The present study aimed to analyze various non-neoplastic and neoplastic lesions of cervix and provide an approach for the better management of these lesions.

We studied 202 cases of various cervical pathologies and the data was analysed to know the relative frequencies and age incidences of different cervical lesions. The results have been compared with various similar studies done previously.

Table 6.

	<b>Saravanan et al(4)</b>	<b>Pandit GA et al(5)</b>	<b>Dubey K et al(6)</b>	<b>Present study</b>
<b>Age group</b>	41-50 years	41-50	30-40	36-45
<b>Percentage</b>	38.9	37.5	48.3	36

Table 7.

Type of lesions	Poste <i>et al</i> <sup>(7)</sup>	Pandit GA <i>et al</i> <sup>(5)</sup>	Present study
Chronic cervicitis	62.93%	61.83%	48.5%
Endocervical Polyp	4.68%	3.66%	03%
Intra-epithelial lesion	4.04%	4.67%	23%
Squamous cell carcinoma	12.46%	10.66%	25%
Adenocarcinoma	0.23%	0.33%	02%

Out of 202 cases, highest incidence (i.e. 74 cases or 36%) was found in age group 36-45years followed by age group 46-55yr with 55 cases or 27%. This result was comparable to the study conducted by Saravan *et al*, Dubey K *et al* and Pandit GA *et al*.

In our present study chronic non-specific endocervicitis was the most common non-neoplastic lesion seen (in 48.5% cases) comparable to the study done by Badge *et al*<sup>1</sup>. Endocervical polyp was found in 3% cases. Saravana *et al*<sup>(4)</sup> found endocervical polyps in 6.5% cases. Singh *et al* found 20% cases of intraepithelial lesion comparable to our present study (i.e. 23%).

Amongst malignant lesions of the cervix squamous cell carcinoma was the commonest lesion accounting for 98% of the total malignant lesions, comparable to the study done by Gupta *et al*<sup>(8)</sup> (i.e. 94.26%). Only one case of adenocarcinoma was reported during the time of our study accounting for 2% of the total cases, which is comparable to the study done by Kumari K *et al*<sup>(9)</sup>.

Incidence of malignant lesions were much higher in our study as compared to other studies as cervical biopsy was advised for clinically or cytologically suspicious cases of malignant and pre-malignant lesions only.

#### 4. CONCLUSION:

In conclusion, females in the middle age group (35-55years) are most prone to develop cervical lesions. Early screening and diagnosis of the lesions by biopsy may alter the course of the disease in these females. Histopathological examination can be considered as a valuable aid for diagnosis of intraepithelial neoplasia and cervical carcinoma and should be attempted at an early stage to provide better prognosis, treatment and protection against invasive cervical cancer.

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