# Original Research

## Histopathological study of cervical lesions in a tertiary care hospital

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**ABSTRACT:**
**Aim:** To conduct a histopathological examination of cervical lesions at a tertiary care hospital. **Methods and materials:** After receiving clearance from the protocol review committee and the institutional ethics committee, this prospective observational research was carried out at the Department of Pathology. In this study, we included 80 patients of any age or religion who came to the hospital. A brief history was taken, including chief complaints, obstetric history, and relevant history, and cervical biopsies or hysterectomy specimens were sent to the pathology department for histopathological confirmation. **Results:** During the current research period, a total of 80 specimens obtained from the department of gynaecology were processed and reported. The most prevalent age group impacted in our research was 35-45 years (42.5 percent ) Out of 80 instances, 60 (75 percent) were classified as non-neoplastic lesions, 17(21.25%) as preinvasive intraepithelial alterations, and 3 (3.75 percent) as neoplastic lesions. In this research, 45 percent of the cases were cervicitis, 9 percent were nabothian cysts, and 5 percent were endocervical polyps. CIN-I alterations were the most prevalent preinvasive intraepithelial lesion (13.75 percent). **Conclusion:** Because our investigation uncovered a wide range of cervical abnormalities, early diagnosis and care of specific lesions may help reduce morbidity.
**Keywords:** Cervical lesions, Histology, pathology, Cervical Carcinoma

## INTRODUCTION

The cervix is a 2.5 to 3.0 cm long fibro muscular region of the uterus bordered by two kinds of epithelium, an outside squamous epithelium and an inside mucin secreting columnar epithelium, with a distinct junctional area containing reserve/basal cells.[1] The cervix is susceptible to a wide range of pathological alterations, from inflammation to cancer. The uterine cervix is the entry point for a variety of non-neoplastic and neoplastic gynaecological lesions.[2,3] Nonneoplastic cervical lesions may occur at any age, but are more prevalent in sexually active women. These include nonneoplastic inflammatory and tumorlike lesions. The majority of nonneoplastic lesions are inflammatory.[4] Acute cervicitis, chronic cervicitis, and chronic granulomatous cervicitis are clinically significant inflammatory lesions.[4,5] These can be caused by both infectious and noninfectious causes. Infectious causes of acute and chronic cervicitis range from bacterial, viral, protozoan, and fungal microorganisms found in sexually transmitted infections (STIs) and urinary tract infections (UTIs). According to research, TB is the most common cause of chronic granulomatous cervicitis.[6-8] Human papillomavirus (HPV) and herpes simplex virus are two sexually transmitted viruses. Condyloma acuminatum, preinvasive cervical intraepithelial neoplasia (CIN I, II, III), and cervical cancer are all risk factors for HPV cervicitis.[6,7] Thus, classification and acquaintance with the histomorphologic characteristics of cervical non-neoplastic lesions are vital in their detection and will enhance the approach toward better patient care.[6] Chronic cervicitis is the most prevalent uterine cervical lesion in the reproductive age group, occurring between the ages of 25 and 55, and is associated with sexual activity, as well as in postmenopausal women due to decreased immunity and hormone replacement medication.[9]

## METHODS AND MATERIALS

After receiving clearance from the protocol review committee and the institutional ethics committee, this prospective observational research was carried out at the Department of Pathology. In this study, we included 80 patients of any age or religion who came to the hospital. A brief history was taken, including chief complaints, obstetric history, and relevant history, and cervical biopsies or hysterectomy specimens were sent to the pathology department for histopathological confirmation.

## STATISTICAL EVALUATION

Data was input into an Excel spreadsheet, and values were calculated using the frequency, percentage, and chi-square tests.

## RESULTS

During the current investigation, a total of 80 specimens were processed and reported from the department of gynaecology. The most prevalent age group impacted in our research was 35-45 years (42.5 percent ) Out of 80 instances, 60 (75 percent) were classified as non-neoplastic lesions, 17 (21.25%) as preinvasive intraepithelial alterations, and 3 (3.75 percent) as neoplastic lesions (Table1). In this research, 45.25 percent of the cases were cervicitis, 9.25 percent were nabothian cysts, and 5.25 percent were endocervical polyps (table 2). CIN-I alterations were the most prevalent preinvasive intraepithelial lesion (13.75 percent ).

**Table-1: Age distribution of patients with cervical lesion**

| Age in years | Number | % |
|---|---|---|
| below 25 | 2 | 2.5 |
| 25-35 | 26 | 32.5 |
| 35-45 | 34 | 42.5 |
| 45-55 | 11 | 13.75 |
| above 55 | 7 | 8.75 |

**Table-2: Distribution of types of Cervical lesion**

| Cervical lesion | Number | % |
|---|---|---|
| Non neoplastic | 60 | 75 |
| Preinvasive | 17 | 21.25 |
| Malignant | 3 | 3.75 |
| Total | 80 | 100 |

**Table-3: Histological types of cervical lesions**

| Histological diagnosis | Number | % |
|---|---|---|
| Chronic non-specific cervicitis | 45 | 56.25 |
| Granulomatous cervicitis | 1 | 1.25 |
| Nabothian cyst | 9 | 11.25 |
| Endocervical polyp | 5 | 6.25 |
| CIN –I Changes | 11 | 13.75 |
| CIN –II Changes | 2 | 2.5 |
| CIN –III Changes | 2 | 2.5 |
| Carcinoma in situ | 1 | 1.25 |
| Squamous cell carcinoma | 2 | 2.5 |
| Adenosquamous carcinoma | 1 | 1.25 |
| Adenocarcinoma | 1 | 1.25 |

## DISCUSSION

In our research, the most prevalent age group impacted (42.5 percent) was 35-45 years (Table-1). This age range corresponded to the findings of Krishnappa et al.10, Pradhan et al.[11], Shruthi et al.[12], Fotra et al.[13], Sinha et al.[14], and Jashamy KA et al. [15] The current research found that non-neoplastic lesions (75%) were more prevalent than malignant lesions in the Rajnandgaon area, which was consistent with previous studies by Avani J et al[16] and Srivani S et al[17], which found that non-neoplastic lesions were 73 percent and 79.7 percent, respectively. However, according to Ali EF et alresearch,.'s malignant conditions (51.2 percent) were more prevalent than non-neoplastic conditions (46.34 percent ).

Chronic non-specific cervicitis accounted for the greatest proportion of non-neoplastic lesion patients (Table-3), which might be attributed to poor personal cleanliness, a lack of health knowledge, and early marriage in the rural Rajnandgaon district. In this analysis, chronic non-specific cervicitis accounted for the bulk of disease burden, as opposed to Kiranmayi et al[18] and Badge et al.[19] Nwachokor et al. have a similar observation. [20] Cervicitis is caused by a variety of species, including bacteria, viruses,

protozoans, and fungi.[18] Granulomatous lesions are most usually caused by Mycobacterium tuberculosis infection and have a 1% frequency.[21,22] In our investigation, two bulky cervix lesions were identified as granulomatous cervicitis in histopathology, and additional microbiological ancillary testing confirmed the aetiology as Mycobacterium tuberculosis.

In 6.25 percent of instances, non-neoplastic tumours such as polyps (endocervical and leiomyomatous) were found. It was equivalent to studies conducted by Saravana et al[17], Nwachokor et al20, and substantially higher than a research conducted by Hatwal et al.[23]

The prevalence of preinvasive lesions in our research was 21.25 percent ( table-2). In his investigation, Kirammyi et al[14] discovered a 15.11 percent preinvasive lesion. In the current research, the incidence of CIN-I (13.75%) was higher than that of CIN-II and CIN-III (Table 3); similarly, Badge et al observed CIN I in 16.14 percent and CIN II in 10.25 percent, and Thapa et al[24] discovered CIN I in 18.06 percent and CIN II in 20.93 percent. Malignant lesions made up 3 (3.75 percent) of the total, which was lower than the results obtained by Avani J et al.[16] and Srivani S et al[17], who found that neoplastic lesions made up 5.5 percent and 9.6 percent, respectively.

The distribution of these three tumours in our research is similar to that of Shingleton et al.[25] and is comparable to that of Jeong et al.,[26] and Galic et al.[27] SCC was shown to be the most frequent tumour in all research evaluated. Cervical adenosquamous cancer is uncommon. It is distinguished by the presence of both glandular and squamous cell differentiation, with each component being malignant. According to the findings of this research, non-neoplastic lesions were more prevalent than malignant lesions, followed by preinvasive lesions. The most prevalent inflammatory lesions were chronic cervicitis, while the most common malignant lesions were Squamous Cell Carcinoma. The authors encountered less instances of malignancy when compared to previous research since this is a tribal rural region where fewer persons come to the hospital in an advanced stage or are sent to higher centres for further treatment.

## CONCLUSION

Because our investigation uncovered a wide range of cervical abnormalities, early diagnosis and care of specific lesions may help reduce morbidity.

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