

# Retrospective Study of Histopathological Findings in Non-Neoplastic Cervical Lesions.

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## ABSTRACT

**Background:** The uterine cervix is prone to several non-neoplastic gynecological lesions. These lesions are a source of morbidity and mortality in women. Therefore, there is need to analyze them to provide the pattern of these lesions. **AIM:** Retrospective study of the findings of non-neoplastic lesions of cervix. **Methods:** A retrospective study was done in Department of Pathology, Government Medical College, Patiala from January 2016 to January 2018. **Results & Conclusion:** Out of 220 cases, the most common non neoplastic lesion recorded was chronic cervicitis (45.9%) followed by squamous metaplasia(37.2%) and nabothian cysts(36.3%).

**Keywords:** Non-neoplastic, Cervix, Lesions.

## INTRODUCTION

The uterus being pyriform in shape is divided into body and cervix which is divided into ectocervix and endocervix. The endocervix is lined by columnar epithelium and the ectocervix by squamous epithelium while the junction of these two at the external os is termed as the squamo-columnar junction.<sup>[1]</sup> Diseases of the cervix mostly affect the young sexually active women.<sup>[2]</sup>

Non-neoplastic diseases of the cervix are mainly inflammatory in nature. Inflammatory lesions of clinicopathological importance are acute cervicitis, chronic cervicitis and chronic granulomatous cervicitis.<sup>[3,4]</sup> Common causes include chemical irritations produced by foreign bodies including tampons, diaphragms, pessaries and intrauterine contraceptive devices.<sup>[2]</sup>

Chronic Granulomatous inflammation of cervix is also very common. Worldwide, the commonest cause is tuberculosis.<sup>[5,6]</sup>

Other common lesions of cervix include tunnel cluster, mesonephric hyperplasia, endometriosis and microglandular endocervical hyperplasia.<sup>[7,8]</sup>

The single best gold standard method for diagnosis of lesions of cervix is histopathological examination of the biopsies.<sup>[9]</sup>

## MATERIALS AND METHODS

This is a retrospective study conducted in the department of pathology Govt. Medical College and Hospital, Patiala during the year January 2016 to January 2018. Total Two hundred and twenty cases of Hysterectomy specimen and cervical biopsy received from the Department of Obstetrics and Gynecology of Rajindra Hospital, Patiala were included. The record of brief history with age, registration number, biopsy number, presenting sign and symptoms along with relevant findings of past history that included obstetric, menstrual, smoking, sexual history with the reference to the age at first coitus and married life. The formalin fixed specimens of cervix were received in the department of pathology.

### Methods

1. Gross examination of the cervix was done and size of cervix normal/Hypertrophied noted, any Nabothian cyst, any abnormal growth like Polyp, Exophytic and Endophytic growth. Pieces were taken according to the specimen.
2. Tissue Processing Included: Dehydration, clearing, impregnation, paraffin block, section cutting by rotator microtome.
3. Fixation: The specimens were kept in 10ml of 10% neutral buffered for fixation for 4-5hrs before subjecting to routine processing.
4. Dehydration: Done gradually by passing the tissue through isopropyl alcohol.

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5. Clearing: The tissue was placed in xylene which removes alcohol which is miscible with wax.
6. Impregnation: The tissue was then placed in molten paraffin, which was used to make the paraffin block. This allows cutting of thin sections(4-5 micrometer).
7. Embedding: The solid medium i.e. paraffin wax was used routinely as embedding medium.
8. Section Cutting: Done using a microtome. Section of 4-5 micrometers were cut.

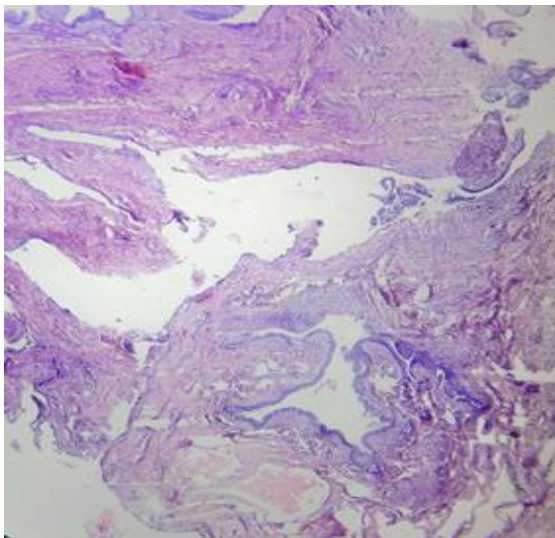
**Inclusion criteria**

All the patients with lesions of uterine cervix.

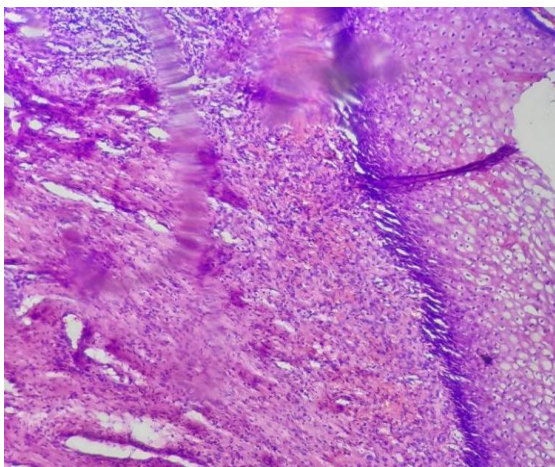
**Exclusion criteria**

1. Patients with various lesions arising from the uterus, vulva, vagina and parametrium or with lesions arising from adjacent organs extending in cervical canal but not involving cervix (eg. endometrial polyp).
2. All neoplastic lesions of cervix.

**RESULTS**

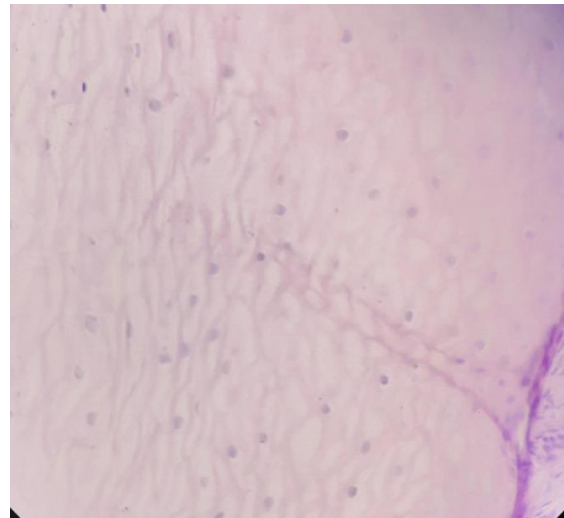


**Figure 1: Photomicrograph Showing Cervical Polyp.**

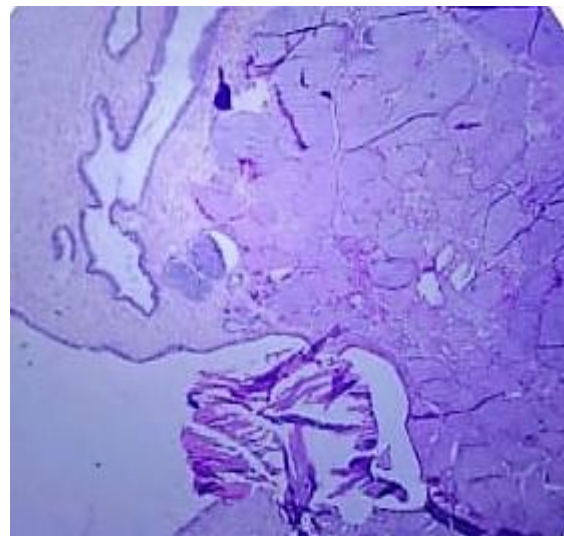


**Figure 2: Photomicrograph Showing Chronic Cervicitis**

Conditions	No. Of Cases/220	Percentage
Chronic Cervicitis	101	45.9%
Squamous Metaplasia (Mature & Immature)	82	37.2%
Nabothian Cysts	80	36.3%
Prolapse	28	12.7%
Endocervical Polyp	23	10.4%
Koilocytic Change	17	7.7%
Chronic Papillary Endocervicitis	12	5.4%
Follicular Cervicitis	6	2.7%
Endocervical Glandular Hyperplasia	5	2.2%
Granulation Tissue Polyp	5	2.2%
Cervical Tunnel Clusters	4	1.8%
Endometriosis	1	0.4%



**Figure 3: Photomicrograph Showing Koilocytic Change**



**Figure 4: Photomicrograph Showing Tunnel Cluster In The Endocervical Tissue Along With Endocervical Glands**

**DISCUSSION**

In our study, the highest percentage of recorded cases were of chronic cervicitis (45.9%) followed by

squamous metaplasia (37.2%), nabothian cysts (36.3%). Other cases recorded were of prolapse (12.7%), endocervical polyp (10.4%) and koilocytic change (7.7%). 12 cases (5.4%) were recorded of Chronic papillary endocervicitis followed by follicular cervicitis (2.7%). Few cases of endocervical glandular hyperplasia (2.2%) and granulation tissue polyp (2.2%) were recorded. Very few cases included cervical tunnel clusters (1.8%) and endometriosis (0.4%) and no case of intestinal or tubal metaplasia was recorded.

With regard to spectrum of lesions Olutoyin G,<sup>[2]</sup> FN Nwachokor,<sup>[10]</sup> Naveen Kumar BJ,<sup>[11]</sup> and Srivani Saravanan,<sup>[12]</sup> reported 38.5%, 56.3%, 78.86% and 79.9% cases of benign lesions respectively among all cervical lesions reported in their respective study groups.

Poste P et al in their study found cervical lesions in 935 out of 1260 cases (74.20%). These lesions mainly constituted chronic nonspecific cervicitis and papillary endocervicitis. Highest percentage of cases were of Chronic nonspecific cervicitis (84.82%) followed by polypoidal endocervicitis (15.18%). Chronic nonspecific cervicitis with koilocytic change was recorded in 12.8% of cases.<sup>[13]</sup>

Omoniyi-Esan et al in their study found Chronic non-specific cervicitis in 82.0% cases.<sup>[14]</sup> This is not surprising because it is a frequently encountered condition both clinically and in histopathological specimens.<sup>[5]</sup>

D Seema in her study recorded grossly normal cervix in 32.51 % and nabothian follicles in 20.07% cases. Also in her study Polyp constituted 4.46% of cases .Chronic cervicitis accounted for (79.66%) of cervical pathologies forming the bulk. Squamous metaplasia was seen in 33.03% of cervical pathologies while, chronic cervicitis with koilocyte change of HPV infection was seen in 13.27 % cases. Thus, squamous metaplasia and nabothian follicles being the most frequent complications of chronic cervicitis.<sup>[15]</sup>

Paaronen J et al said that the cause of chronic nonspecific cervicitis is variable and it may lead to endometritis, salpingitis and pelvic inflammatory disease through ascending intraluminal spread.<sup>[16]</sup>

## CONCLUSION

There is a wide variation in the non-neoplastic lesions of the cervix. Histopathological examination remains the gold standard in confirmation of the diagnosis resulting in better management and follow up of the patients.

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