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Original Article

Pathology Section

Cervicitis: How Often Is It Non-specific!

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ABSTRACT

Background: Uterine cervix is most often reported as 'non specific cervicitis'. It is an effort to encourage specific reporting and thereby avoiding the term 'non specific' to a possible extent.

Materials and Methods: The study is carried out on 613 specimens of uterine cervix received at Department of Pathology, Aarupadai Veedu Medical College, Pondicherry, between 1st January 2010 to 31st December 2012.

Histopathology slides of all the cases were studied for the presence of specific features of various inflammatory lesions. Results are expressed in percentage.

Results: Chronic nonspecific cervicitis was the commonest inflammatory lesion constituting 89.23% of the cases. Other inflammatory lesions were follicular cervicitis in 6.85%, chronic cervicitis with koilocytosis in 3.75% and only one case (0.16%) of tuberculosis was observed.

Conclusion: Importance of these benign lesions of the uterine cervix lies in the fact that some of them like Chlamydia, Papilloma infection have specific treatment and some of them form differential diagnosis for malignant lesions and some progress to malignancy.

Keywords: Endometritis, Treatment, Uterine cervix

INTRODUCTION

Non-neoplastic diseases of uterine cervix are predominantly inflammatory and are common, but there are very few publications on the subject compared to neoplastic diseases.

Chronic cervicitis is an extremely common condition in adult females, at least at the microscopic level. Its importance lies in the fact that it may lead to endometritis, salpingitis, pelvic inflammatory disease, chorioamnionitis, and other complications during pregnancy, and it may also play a role in initiation or promotion of cervical neoplasia [1].

Viral infections in the cervix result in two types of tissue responses. The first one being degeneration and death; in the second, cells are stimulated into mitotic activity, which sometimes leads to overt neoplasia [2].

Cervix Uteri is most often reported as 'non specific cervicitis'. It is an effort to encourage specific reporting and thereby avoiding the term 'non specific' to a possible extent.

MATERIALS AND METHODS

The present prospective cross-sectional study was conducted over a period of 3years (Jan 2010 to Dec 2012) in the Department of Pathology, Aarupadai Veedu Medical College and Hospital, Puducherry, India.

The study included 613 specimens of uterine cervix obtained either in the form of biopsies or hysterectomy specimens. All dysplastic, in-situ and invasive malignant neoplasm of uterine cervix and inadequate biopsy specimens were excluded from the study. A detailed clinical details including age, parity, clinical findings and provisional diagnosis were collected from the gynecology department.

All the specimens received at histopathology section were fixed in 10% formalin. The macroscopic findings of the hysterectomy specimens were examined and recorded, followed by fixation in 10% formalin for 24 h. The hysterectomy specimen was later sampled carefully and tissue pieces were processed. The entire tissue piece of the biopsy specimen was submitted for processing.

After routine processing, sections were cut at 4-6µ thickness and stained routinely using Hematoxylin and Eosin stain. These stained sections were analyzed by light microscopy. Ziehl Neelsen stain was performed wherever required.

RESULTS

Total specimen received in histopathology during the study period is 2183. Out of this 613 specimen were included in the study as per the inclusion and exclusion criteria. These 613 specimens were either of hysterectomy or biopsy, which had cervical tissue.

S. No	Lesions	No. of cases	Frequency (%)
1	Non-specific cervicitis	547	89.23%
2	Follicular cervicitis	42	6.85%
3	Chronic cervicitis with Koilocytic change	23	3.75%
4	Tuberculosis	01	0.16%
	Total	613	

[Table/Fig-1]: Showing different forms of Cervicitis encountered in the present study

Out of 613 of the cases, 547 showed non-specific cervicitis, with no other pathology. But, 42 cases displayed follicular cervicitis (Chlamydial infection to be ruled out). Though Follicular cervicitis is not diagnostic of Chlamydia infection, it has been shown to be more commonly associated with positive cultures than not. So, if follicular cervicitis is identified in a biopsy, a comment should be made in the report that this finding may be associated with Chlamydia [3]. Twenty three cases displayed koilocytic change suggestive of Papilloma virus infection. Only one case displayed epithelioid cell granulomas with caseation suggesting Tuberculous infection. Cervicitis is non-specific in about 89% of the cases in this study. 11% of cervicitis has specific causes [Table/Fig-1].

DISCUSSION

Chronic Non-Specific Cervicitis

Frequency of occurrence of chronic non-specific cervicitis was 89.23% in the present study, 72.2% in a study by FN Nwachokor, GC Forae [4] and 82% in a study by Olutoyin G & Omoniyi-Esan et al., [5] [Table/Fig-2].

Study (no. of cases)	Frequency (%)
Present study (n=613)	89.23%
FN Nwachokor, [4] GC Forae (n=176)	72.2%
Olutoyin G & Omoniyi-Esan et al., [5] (n=400)	82%

[Table/Fig-2]: Comparison of frequency of occurrence of chronic non-specific cervicitis

Chronic Cervicitis with Koilocytic Change

In the present study age range for chronic cervicitis with koilocytic change pathognomonic of subclinical papilloma virus infection was 23-55 y with a mean age of 39 y. In a study by Christopher PC et al., [6] the mean age for subclinical papilloma virus infection was 26y [Table/Fig-3].

Study (no. of cases)	Age range (yrs)	Mean age (yrs)
Present study (n=38)	23-55 y	39 y
Christopher P C et al.,[3] (1983) (n=16)	-	26 y

[Table/Fig-3]: Showing comparison of age range and mean age for subclinical papilloma virus infection

Frequency of occurrence of chronic cervicitis with koilocytic change pathognomonic of subclinical papilloma virus infection was 3.75% in the present study, 4.0 in a study by Christopher P C et al., [6] and 12 in Olutoyin G Omoniyi-Esan et al., [5], suggesting high prevalence of HPV infection in Nigerian population [Table/Fig-4].

Study (no. of cases)	Frequency (%)
Present study (n=613)	3.75
Christopher P C et al.,[3] (1983) (n=400)	4.00
Olutoyin G Omoniyi-Esan et al.,[5] (2006) (n=400)	12

[Table/Fig-4]: Comparison of frequency of occurrence of subclinical papilloma virus infection

Study (no. of cases)	Germinal Centers	
	No. of cases	Frequency (%)
Present study (n=613)	42	6.85
Roberts and Ng (n=450)	-	2.4
M J Hare et al.,[7] (n=34)	10	29.4

[Table/Fig-5]: Comparison of frequency of occurrence of lymphoid follicles in the cervix

Microscopic features noted in the present study were koilocytic change, individual cell keratinisation, and occasional multinucleation. Christopher P C et al., [6] considered few additional features in their study like- parabasal cell hyperplasia, minimal basal and parabasal cell atypia and nuclear enlargement.

Follicular Cervicitis

In the present study the age range for the cases with probable chlamydial infection was 22-52 y with a mean age of 41 y. In a study by M J Hare et al., [7] on sexual partners of men with non-gonococcal urethritis age range of the patients was 16-48 y with a mean age of 27 y.

Frequency of occurrence of lymphoid follicles was 6.85% in the present study, 2.4 in Roberts and Ng study and 29.4 in a study by M J Hare et al., on sexual partners of men with non-gonococcal urethritis [7] [Table/Fig-5].

Tuberculosis

Frequency of occurrence of Tuberculous cervicitis was 0.16% in the present study and 0.69 in a study by F Nogales-Ortiz et al., [8] [Table/Fig-6].

Study (no. of cases)	Frequency (%)
Present study (n=613)	0.16
F Nogales-Ortiz et al.,[8] (n=1436)	0.69

[Table/Fig-6]: Comparison of frequency of occurrence of Tuberculosis

In this study 66 of 613 cases had characteristic features, which mean term 'Chronic non-specific cervicitis' can be avoided in about 11% of the cases with careful screening of the slides of uterine cervix [Table/Fig-1].

CONCLUSION

Non-neoplastic diseases of uterine cervix are predominantly inflammatory and are common, but there are very few publications on the subject compared to neoplastic diseases.

This is an attempt to know how often cervicitis can be nonspecific. Cervicitis is non-specific in 89% of cervices in the present study. Around 11% of cervicitis can be of specific aetiology, Chlamydia and Papilloma virus being most common cause. Importance of these benign lesions of the Cervix Uteri lies in the fact that Chlamydial infection has specific therapy and Papilloma virus infection may progress to malignancy.

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