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Study on Non-Neoplastic Cervical Lesions of Uterus in Teaching Hospital, Batticalo, Sri Lanka

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Original Research Article

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Abstract: The uterine cervix is prone for several non-neoplastic and neoplastic lesions. If the non-neoplastic lesion is misdiagnosed as a malignant it can lead to serious consequences. Therefore, the histopathology is the best diagnostic tool for the diagnosis of non-neoplastic cervical lesions. The present study was undertaken with the aim to establish the prevalence and histopathological patterns of non-neoplastic cervical lesions in Teaching Hospital, Batticaloa, Sri Lanka. Further, and the incidence of lesions was studied with respect to age of the subjects and their clinical presentation. A total of 456 cases of non– neoplastic lesions of uterine cervix were undertaken for this study. The material consists of cervical biopsy both from punch biopsy or cone biopsy and from cervical polypectomy. A relevant clinical profile of retrospective cases was taken from laboratory case records. Of the 456 non-neoplastic cervical specimens, 355 were from cervical biopsy either punch, cone biopsy and 87 from the cervical polypectomy and remaining 14from the amputated cervix. The age of patient in this study were ranges from 19-84 years with peak age of non-neoplastic lesions of cervix in our study was 40-49 years and accounts for 40.6%.According to presentation, about 20.4% of the patients presented with whitish per vaginal discharge. !8.9% of the women presented with the mass in the vagina. While abnormal menstruation (irregular menses and excessive bleeding) was the presentation in 48.9% of the patients, 6.1 % of the patients had post coital bleeding. Only 5.7% of the patients presented with abdominal pain. Majority of the non-neoplastic lesions of the cervix are inflammation the cervix and cervical polyp, constitute 41.4% and 19.7% respectively. The chronic nonspecific cervicitis was the most common inflammatory lesion constituting 86.2% of cases. The effectiveness of Pap smear test in detecting cervical precancers, easy accessibility to cervix by colposcopy and biopsy are the best tool for early detection and eradication of preinvasive lesions. PAP smears would have avoided cervical biopsy under general anaesthesia.

Keywords: Non-Neoplastic Cervical Lesions of Uterus.

INTRODUCTION

Cervical lesions are more frequent and common gynaecological problem seen in day to day gynaecological practice. Sexually active women are more prone for cervical disease [1]. The uterine cervix is prone for several nonneoplastic and neoplastic lesions. They are one of the common reasons for morbidity and mortality in women. A wide variety of nonneoplastic lesions occurs in the uterine cervix and is prone to varying extents of misinterpretation. The most common error is to mistake one of these benign with malignant. There can be potentially adverse consequences for the patient in the form of inappropriate treatment especially if the diagnosis is missed. Therefore, the histopathology is the best diagnostic tool for the diagnosis of non-neoplastic cervical lesions [2].

Gynaecological specimens form the major proportion of tissue biopsy in most histopathological departments [3]. Non-neoplastic diseases of the cervix are predominantly inflammatory in nature. The inflammatory lesions of cervix are acute cervicitis, chronic cervicitis and chronic granulomatous cervicitis [4].

Aetiologically, acute and chronic cervicitis can be infective and non-infective in origin. Non infective cervicitis is most often chemical in nature. Infective causes of cervicitis can be due to bacterial, viral, protozoan and fungi microorganisms which are commonly seen in sexually transmitted infections (STIs) and urinary tract infections (UTIs). Chronic granulomatous cervicitis is mostly caused by tuberculosis [5].

Human papilloma viruses and Herpes simplex virus is common causal agent for viral cervicitis and Former is strongly associated with condyloma acuminatum, pre invasive cervical intraepithelial neoplasia and cervical carcinoma [6].

Non neoplastic tumors like lesions of cervix are endocervical hyperplasia, end cervical polyp, nabothian cyst and endometriosis etc [7-9]. The term chronic cervicitis may indicate only the duration of the symptoms, which becomes very diffcult for the gynaecologist to correlate with clinical diagnosis. Other lesions such as tunnel clusters, mesonephric hyperplasia, endometriosis, and microglandular endocervical hyperplasia may be misinterpreted as malignant [4].

Thus, categorization and familiarity of the cervical non-neoplastic lesions with their histo-morphologic findings are essential in their recognition and could improve the approach toward better management of the patient. Histopathologic studies of the cervix along with clinical correlation are very important for early diagnosis in diseases of the cervical diseases as they have advantage of being readily available, relatively cheap, and technically easy [10].

The present study was undertaken with the aim to establish the prevalence and histopathological patterns of non-neoplastic cervical lesions in Teaching Hospital, Batticaloa Further, and the incidence of lesions will be studied with respect to age of the subjects and their clinical presentation. Batticaloa is located in the Eastern province of Sri Lanka. Its total population is about 546791in2016 and live in 2610 square km area.

MATERIALS AND METHODS

This retrospective study was conducted in Teaching Hospital Batticaloa during five and a half years period between January 2012 and June 2017. A total of 456 cases ofnon– neoplastic lesions of uterine cervix were undertaken for this study.

The material for the study consists of cervical biopsy both from punch biopsy or cone biopsy and from cervical polypectomy. A relevant clinical profile of retrospective cases was taken from laboratory case records.

All the lesions of the uterine cervix involving ectocervix and endocervix were included and lesions arising from the body of uterus, vulva, vagina, and neighbouring organs extending in cervical canal but not involving cervical tissue and parametrium were excluded.

Data were processed using SPSS version 21. Descriptive statistics methods were used to analyse the results as whole numbers, percentages, tables, and charts.

RESULTS

Of the 456 non-neoplastic cervical specimens, 355 were from cervical biopsy either punch, cone biopsy and 87 from the cervical polypectomy and remaining 14from the amputated cervix. The age of patient in this study were ranges from 19-84 years with peak age of non-neoplastic lesions of cervix in our study was 40-49 years and accounts for 40.6% in Table 1.

Table-1: **Age Distribution of Patients with Non-Neoplastic Cervical Lesions**

Age groups	Frequency	Percentage (%)
19-29	38	8.3
30-39	105	23.0
40-49	185	40.6
50-59	92	20.2
60-69	30	6.6
70-85	6	1.3
Total	456	100.0

According to presentation, about 20.4% of the patients presented with whitish per vaginal discharge. !8.9% of the women presented with the mass in the vagina. While abnormal menstruation (irregular menses and excessive bleeding) was the presentation in 48.9% of the patients, 6.1 % of the patients had post coital bleeding. Only 5.7% of the patients presented with abdominal pain. (Table 2)

Table-2: **clinical presentation of study population**

Histological findings	Frequency	Percentage (%)
Inflammation	189	41.4
Polyps	90	19.7
Metaplasia	11	2.4
Hyperplasia	42	9.2
Koilocytic changes	3	.7
CIN- Low grade, High grade	17	3.7
Prolapse changes	4	.9
leiyomyoma	11	2.4
No significant abnormalities	89	19.5
Total	456	100.0

Table-3: **Histological Types of Non-Neoplastic Cervical Lesions**

Clinical symptoms	Frequency	Percentage (%)
Whitish discharge	93	20.4
Mass	86	18.9
Irregular/excessive PV bleeding	223	48.9
Abdominal pain	26	5.7
Post coital bleeding	28	6.1
Total	456	100.0

Majority of the non-neoplastic lesions of the cervix are inflammation the cervix and cervical polyp, constitute 41.4% and 19.7% respectively. The chronic nonspecific cervicitis was the most common inflammatory lesion constituting 86.2% of cases.

The occurrence of cervical intraepithelial neoplasia (CIN) in this study was 17 out of 456 (3.7%) cases. CIN 1 constitutes 9 cases and CIN 11 and 111 constitutes 8 cases.

Table-4: **Histological sub Types of Inflammatory Cervical Lesions**

Age	Inflammatory cervical lesion			Total	Percentage (%)
	Chronic non-specific cervicitis	Papillary endocervicitis	Acute cevicitis		
19-29	9	5	1	15	7.9
30-39	40	8	2	50	26.5
40-49	75	1	3	79	41.8
50-59	27	5	0	32	16.9
60-69	10	0	1	11	5.8
70-85	2	0	0	2	1.1
Total	163	19	7	189	100
Percentage (%)	86.2	10.1	3.7		

DISCUSSIONS

In the period of five and a half years of retrospective study, 456 histological samples were confirmed as non-neoplastic cervical lesions. Non-neoplastic lesions of the uterine cervix form the majority of the gynaecologic specimens in histopathology departments [4].

There are various numbers of non-neoplastic lesions, which are of great importance to the clinician and the pathologist. The diagnosis and approach toward these lesions are greatly neglected[4,11].Maximum number of cases was found in 40-49 years of age group and the present study correlated well with the study of Omoniyi-Esan *et al*.[12].

In present study, inflammation of the cervix was found in 41.4% of all non-neoplastic cervices. Findings of our study was contrast to the observations made by Howard *et al*. (98% of 400 specimens) and Hawkins and Bourne (80%) [14]. Omoniyi *et al*. in their study reported incidence of chronic nonspecific cervictis 82 % of all non –neoplastic lesions [12]

In our study, we observed 37.1% of chronic nonspecific cervicitis, which was contrast to previous study. Of all the non-neoplastic lesions endocervical hyperplasia was seen in 9.2% and endocervical polyp in 19.7% cases. These findings are in contrast to findings of study done by Pallipady *et al*., Where endocervical hyperplasia seen in 4.3% and polyp in 1.87% of non-neoplastic cervical biopsy [4, 16]. A study conducted by Branko *et al.* [20] revealed that endocervical polyps

occurred in 2%–5% of multigravida women in the age group of 30–59 years. The patients of acute cervicitis usually do not required cervical biopsy because most they are medically treated because of acute discomfort and purulent cervical discharge. Olutoyin *et al*., in their study received only 2 % of acute cervicitis [15, 17]

In our study acute cervitis was present in 1.53% of cases and consistent with findings of previous study.Squamous metaplasia in cervix is a physiological change in female during puberty, reproductive years and menopause and very commonly encountered under microscopic examination. The proper recognition of squamous metaplasia on histopathology can avoid an over diagnosis of CIN (cervical intraepithelial neoplasia) [16, 18, 19].

We could not perform Elisa, HPV serology and immune histochemistry in this study due to their non-availability in our poor resource setup and high cost. The effectiveness of Pap (Papanicolaou-stained smear) test in detecting cervical precancers, easy accessibility to cervix by colposcopy and biopsy are the best tool for early detection and eradication of preinvasive lesions, some of it may progressed to cancer if not diagnosed and treated timely. Therefore PAP smears would have avoided cervical biopsy under general anaesthesia [20].

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