e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2022; 14(9); 240-245

Original Research Article

A Hospital Based Observational Assessment of the Histopathology of Cervical Lesions

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Received: 14-05-2022 / Revised: 21-07-2022 / Accepted: 01-09-2022

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Conflict of interest: Nil

Abstract

Aim: To study the histopathological features of cervical lesions.

Methodology: The present observational study was carried out in the Department of Pathology, Darbhanga Medical College and Hospital, Darbhanga, Bihar, India from Jan 2019 to December 2019. A total of 100 cervical specimens were received in the department of Pathology and specimens were in the form of cervical punch biopsies, hysterectomies, Wertheim's hysterectomy and cervical amputation.

Results: In our study 65% patients presented with white discharge, 27% with Back ache + abdominal pain, bleeding per vagina in 3%. 4% with pelvic pain and only 1% presented with dyspareunia. In the present study according to Broder's grading, moderately differentiated squamous cell carcinoma was most commonly reported, poorly differentiated in 25% and well differentiated in 17%.

Conclusion: Histopathology study of cervical biopsy lesions is a valuable diagnostic procedure. Early detection of cervical lesions may provide an opportunity for appropriate interventions to prevent further complications such as progression from benign to malignant conditions. Adequate screening procedure with follow up cervical biopsies helps in early diagnosis and management of premalignant and malignant lesions.

Keywords: Cervical biopsy, Cervicitis, Carcinoma

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Introduction

Inflammatory lesions of clinic pathological importance are acute cervicitis, chronic cervicitis and chronic granulomatous cervicitis. [1] These can result from both infective and non-infective etiology. Infective causes of acute and chronic cervicitis include a wide spectrum ranging from bacterial, viral, protozoan and fungi microorganisms commonly encountered in sexually transmitted infections (STIs) and urinary tract infections (UTIs). Studies have shown that chronic granulomatous cervicitis is mostly caused by tuberculosis. [2-3]

The cervix is the elongated fibro muscular portion of the uterus that measures 2.5 to 3.0 cm, lined by two types of epitheliums, an outer squamous epithelium and internal mucin secreting columnar epithelium, with unique junctional area containing

reserve/basal cells. [4] Cervix is vulnerable to many pathological changes ranging from inflammation to malignancy. Uterine cervix is gateway to several non-neoplastic and neoplastic gynecological lesions. [5-6] Non-neoplastic cervical lesions are seen in all age groups but are more commonly seen in sexually active women. These include inflammatory and tumor-like non-neoplastic lesions. Majority of non-neoplastic lesions are inflammatory in nature. [6-7]

Non-neoplastic cervical lesions occur in all age groups amongst women but are more common in reproductive and sexually active women. [8] Nonneoplastic cervical lesions include inflammatory lesions and non-neoplastic tumor-like lesions. The majority of these inflammatory lesions are acute cervicitis, chronic cervicitis caused by various bacteria, viruses and fungi. [8] Cervicitis caused by the Human papillomavirus carries a high risk for Condyloma acuminata, cervical intraepithelial neoplasia (CIN) and carcinoma. [9] Cervical carcinomas are classified by WHO classification which is widely accepted. [10]

Material & Methods:

The present observational study was carried out in the Department of Pathology, Darbhanga Medical College and Hospital, Darbhanga, Bihar, India from Jan 2019 to December 2019

Inclusion criteria:

All cervical biopsies and hysterectomy specimens sent to the department of pathology for histopathological examination.

Exclusion criteria:

Cervical biopsies found to be unsatisfactory for evaluation on microscopic examination after processing and endometrial, myometrial and ovarian lesions in hysterectomy specimens.

Methodology:

A total of 100 cervical specimens were received in the department of Pathology and specimens were in the form of cervical punch biopsies, hysterectomies, Wertheim's hysterectomy and cervical amputation. All the specimens and biopsy were fixed in 10% formalin and paraffin blocks were prepared, which were cut at 5-micron thickness and were subsequently stained with hematoxylin and eosin. A preformed proforma was prepared and included demographics such as clinical features, gross appearance and histopathological features. Gross examination was done and features such as size, consistency, external appearance and appearance of cut surface were noted. The specimens were allowed to fix in 10% formalin for 24-48 hours. The sections were dehydrated in alcohol, cleared in xylol and embedded in paraffin wax to prepare the paraffin blocks. Multiple thin sections of 4 -5 microns in thickness were cut.

Multiple blocks from different areas of lesion were studied in each case. For histopathological study, the paraffin embedded sections were stained by Hematoxylin and Eosin (H & E) stain. The histopathological classification of tumors was done according to recommendations by W.H.O.

Statistical analysis:

Data is entered in Microsoft Excel sheet and analyzed using SPSS version 20.0 statistical software. Data depicted in the form of tables, graph's percentage and proportion.

Results:

In our study age distribution range from 20-80 years with majority of cases included among 41-50 years which constituted about 46%. Next common age group among 31-40 years constituted 21%. 15% in 20-30 years, 10% in 51-60 years, 7% in 61-70 years and least noted in 71-80 years i.e., 1%. [Table 1]

Table 1: Age distribution

Age in years	No. of cases
20-30	15
31-40	21
41-50	46
51-60	10
61-70	7
71-80	1
Total	100

In our study 65% patients presented with white discharge, 27% with Back ache + abdominal pain, bleeding per vagina in 3%. 4% with pelvic pain and only 1% presented with dyspareunia. [Table 2]

Table 2: Clinical complaints

Clinical features	No. of cases
White discharge	65
Back ache +Abdominal pain	27
Bleeding per vagina	3
Pelvic pain	4
Dyspareunia	1
Total	100

87 lesions were Non neoplastic and majority was inflammatory in nature second most common was benign lesions 8%. Invasive lesions occupied only 3% and preinvasive about 2% respectively. [Table 3]

Table 3: Distribution of cervical lesions

Cervical lesions	Non neoplastic
Non neoplastic	87
Benign lesions	8
Preinvasive lesions	2
Invasive lesion	3
Present study	100

In our study among non-neoplastic cervical lesions, majority of the cases reported as chronic nonspecific cervicitis which constituted 54.8%, next common was chronic papillary endocervicitis 24%. Among neoplastic lesions of cervix, Squamous cell carcinoma was reported in 1% cases and only one case of adenocarcinoma of cervix was reported. Cervical leiomyoma was reported in 3% cases. [Table 4]

Table 4: Histopathological distribution of non-neoplastic, preinvasive and invasive cervical lesions cervical lesions

Cervical lesions	No. of cases
Chronic nonspecific cervicitis	60
Chronic Papillary endocervicitis	24
Endocervical polyp	4

Erosive cervicitis	3
Pseudoepitheliomatous hyperplasia	2
Cervical leiomyoma	3
Carcinoma insitu	1
CIN 1	0
CIN 2	1
CIN 3	0
Squamous cell carcinoma	1
Adenocarcinoma	1
Total	100

In the present study according to Broder's grading, moderately differentiated squamous cell carcinoma was most commonly reported, poorly differentiated in 25% and well differentiated in 17% [Table 5]

Table 5: Classification according to Broder's grading

Cervical carcinoma	No. of cases
Poorly- Differentiated	04
Moderately- Differentiated	08
Well- Differentiated	03
Total	14

Discussion:

Incidence of carcinoma cervix has declined in developed countries, but cervix is still the one most common histopathological specimen in pathology department. [11]. The diagnosis of cervical lesions is grossly neglected. [12]

In our study age distribution range from 20-80 years with majority of cases included among 41-50 years which constituted about 46%. Next common age group among 31-40 years constituted 21%. 15% in 20-30 years, 10% in 51-60 years, 7% in 61-70 years and least noted in 71-80 years i.e., 1%. These findings are consistent with the study of FN et al., (33.7%) and Ile-life et (34.7 %) [13].

In our study 65% patients presented with white discharge, 27% with Back ache + abdominal pain, bleeding per vagina in 3%. 4% with pelvic pain and only 1% presented with dyspareunia. These findings were found in consistency with the study conducted by Hatwal D et al. observed white discharge per vagina was seen in (33.65%), mass per vagina in (25.39%), irregular menses and excessive bleeding per vagina (25.71%), pain in abdomen in (6.98%) and post coital bleeding in (8.25%) patients. [14]

The present study shows non-neoplastic lesions (74.1%) are more common than malignant lesions in the Rajnandgaon region which was similar to the study conducted by Srivani S et al [8] in which non-neoplastic lesion were 73% and 79.7% respectively.

Non-neoplastic lesions of the uterine cervix form a major bulk of the gynecologic specimens in histopathology department. There are a variety of non-neoplastic lesions, which are of immense importance to the clinician and the pathologist and are overlooked so a guided approach towards the diagnosis of these lesions should be undertaken. [15]

The non-neoplastic lesions of the uterine cervix like cervical inflammatory lesions may be acute or chronic resulting due to infective or non-infective etiology. [16] Paavonen J et al [17] in their study have stated that chronic non- specific cervicitis has variable etiology and needs to be paid attention to as it may lead to endometritis, salpingitis and "pelvic inflammatory disease" through ascending intraluminal

spread; chorioamnionitis and it may also initiate or promote cervical neoplasia. [3] HPV cervicitis is on an increasing trend worldwide. [18,19]

Conclusion:

In our study non neoplastic lesions were more common as compared to neoplastic lesions with chronic cervicitis being the most common of all the lesions. Histopathological examination helps in early diagnosis of malignant and premalignant conditions and their prompt treatment.

Histopathology study of cervical biopsy lesions is a valuable diagnostic procedure. Early detection of cervical lesions may provide an opportunity for appropriate interventions to prevent further complications such as progression from benign to malignant conditions. Adequate screening procedure with follow up cervical biopsies helps in early diagnosis and management of premalignant and malignant lesions.

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