

Histopathological spectrum of cervical lesions- Our institute experience

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Abstract

Introduction: The aim of the study is to find out various cervical lesions with histopathological correlation and age.

Materials and Methods: This is a retrospective study conducted at department of Pathology in Tertiary care center from January 2015 to October 2015. The data of 208 patients were retrieved from past records who were diagnosed with various cervical lesions. Cervical biopsies were available for 119 cases and specimens of uterus with cervix were found in 88 cases and vault biopsy in one case.

Results: Out of 208 cases, 67 cases (32.2%) were that of Chronic non-specific cervicitis, 33 cases (15.86%) were papillary endocervicitis, 24 cases (11.5%) were Cervical intraepithelial neoplasia (CIN), 72 cases (34.6%) were cervical cancer, 6 cases (2.8%) were hyperplasia, One case (0.9%) showed squamous metaplasia with koilocytic changes, 4 cases (1.9%) did not show any remarkable pathology. Most common age group from squamous cell carcinoma were 41-50 years.

Conclusion: Most common cervical lesion is Squamous Cell carcinoma and most common age group is 41-50 years.

Keywords: Histopathology, Cervical lesions.

Introduction

The cervix is the elongated fibromuscular portion of the uterus. It measures 2.5 to 3.0 cms and is lined by two types of epithelium, an outer squamous epithelium and internal mucin secreting columnar epithelium, with unique transformation zone containing reserve/basal cells. This epithelium is susceptible to many pathological changes from inflammation to malignant transformation. Cervix is prone to develop several neoplastic and non neoplastic lesions. It is more prevalent in reproductive age groups. Majority are inflammatory and nonneoplastic lesions.¹ Non neoplastic lesions are caused by bacteria, virus, protozoa and fungus. Human papilloma virus is a potent risk factor for CIN and cancer.² Carcinoma cervix is an important public health problem world wide, particularly in developing countries and accounts for 20-25% of all cancers and 80-85% of all genital tract. In India, 90,000 of new cases of cervical cancer occur every year.³

Aims and Objectives

1. To explore various neoplastic and non neoplastic cervical lesions received in tertiary care center of south Gujarat.
2. Its correlation with age.
3. Frequency of non neoplastic and neoplastic cervical lesions.

Materials and Methods

This is a retrospective study conducted at Department of Pathology in tertiary care center from January 2015 to October 2015.

The data of 208 patients were retrieved from past records who were diagnosed with various cervical lesions. Cervical biopsy were available for 120 cases and uterus with cervix in remaining 88 cases. All the Hysterectomy specimens and cervical biopsies were received from Obstetrics and Gynaecology department of our institute. Specimens were fixed in 10% formalin and histopathological specimens were processed, blocks were prepared and slides were stained in hematoxylin and eosin stains.

Results and Observations

Out of 208 cases, 120 cases (58%) were that of cervical biopsies, whereas uterus with cervix constituted 88 case (42%). Out of 208 cases, 136 cases were non neoplastic cases (65%) and remaining were neoplastic (35%). The most common lesion were that of Inflammatory lesions (100 cases, 48%). Out of which, chronic non specific cervicitis comprised of 67 cases (32.2%) whereas papillary endocervicitis was noted in 33 cases (15.86%). 72 cases were that of carcinoma cervix (34.6%). Cervical intraepithelial neoplasia were seen in 24 cases (11.5) and hyperplasia in 6 cases (2.8%). Four cases had no remarkable pathology (1.9%). Squamous metaplasia with koilocytic changes was seen in one case.

Chronic non specific cervicitis was most commonly seen in 41-50 years of age 30 cases out of 67 cases (44.7%). 25 cases were seen in 31-40 age group

(37.3%). Four cases were seen in 61-70 group of age (5.9%). Three cases were seen in 51-60 group of age (4.4%). Two cases each were seen in 0-20, 21-30, 71-30 group of age(2.9%).

Carcinoma cervix was most commonly seen in 41-50 group of age consisting of 27 cases out of 72 cases(37.5%), followed by 31-40 years of age comprising of 18 cases(25%).51-60 group of age constituted 16 cases(22.2%). Six cases were noted in 61-70 group of age (8.4%). Three cases were seen in 21-30 age group (4.1%). 71-80 age group included two cases (2.7%).67 cases out of 72 cases were that of squamous cell carcinoma (93.05%) and 5 cases were that of adenocarcinoma(6.95%).

Cervical intraepithelial neoplasia (CIN) were most commonly seen in 31-40 group of age. 12 cases out of 24 cases (50%) were identified in this age group. Six cases were seen in 41-50 group of age 25%). Three cases were seen in 21-30 group of age (12.5%). Two cases were seen in 61-70 group of age (8.3%) whereas one case was noted in 61-70 age group (4.1%).

CIN 1 constituted maximum number of cases ie 12 cases out of 24 (50%).CIN 2 were seen in 7 cases (29.1%). CIN 3 were noted in 5 cases (20.8%).

Discussion

Hysterectomy specimens and cervical biopsies are one of the common specimens received in the histopathology department. Inflammatory lesions ie Chronic non specific cervicitis (32.2%) and papillary endocervicitis (15.86%) constituted the majority in our study with 100 cases (48.1%). This is an expected finding since chronic non specific cervicitis is a frequently encountered condition both clinically and histopathologically. Chronic non specific cervicitis is most commonly seen in 41-50 years of age (44.7%). This finding correlated with study of Srivani et al,⁴ Craig and Lowe,⁵ aravind palliday et al,⁶ Omoniyi-Esan et al.⁷ However our study differed from Mahgoub et al⁸ where cervical polyp was the most common non neoplastic lesion. The study of Mahgoub et al took place in military hospital in Sudan and only 41 cases were studied. Less number of cases studied and being a military hospital where only referred cases were operated may be a reason for not matching with our study. Out of 208 cases, 72 cases(34.6%) were that of carcinoma cervix out of which 67cases were invasive squamous cell carcinoma (93%) and 5 were of adenocarcinoma (7%). This finding correlated with study of Srivani et al,⁴ Dhakal et al,⁹ Ehsan san Ullah et al,¹⁰ Badar et al,¹¹ Ollu Eddo an et al.¹² Our institute being located in a industrialized city where there is majority of employees are migratory workers leading to rise in increase in multiple sexual partners, its not surprising the increase in the incidence of Cervical Cancer in our study.

Carcinoma Cervix was most commonly seen in 41-50 years of age. This finding also correlated with study of Srivani et al,⁴ Dhakal et al,⁹ Sarla Agarwal et al,¹³ Olu Eddo an et al,¹² Tricia et al,¹⁴ Badar et al,¹¹ Oa Oguntayo et al¹⁵ where it was most prominent in fifth decade. In study of Mahgaoub et al, it was most prevalent in 7th decade (63.03 mean age). Less number of cases studied may be the reason of this difference.

Table 1: Comparison between SCC and adenocarcinoma

| Study | SCC | Adenocarcinoma |
|-------------------------------------|--------|----------------|
| Dhakal et al ⁹ | 93% | 3.8% |
| Ehsan San Ullah et al ¹⁰ | 86% | 14% |
| Badar F et al ¹¹ | 75% | 7.9% |
| Olu-eddo an et al ¹² | 92.3% | 6% |
| Srivani et al ⁴ | 100% | 0% |
| Our study | 93.05% | 6.95% |

Table 2: Mean age of cervical cancer

| Study | Mean age |
|-------------------------------------|----------|
| Mahgoub et al ⁽⁸⁾ | 63.03 |
| Sarla Agarwal et al ⁽¹³⁾ | 50 |
| Olu Eddo An et al ⁽¹²⁾ | 51.42 |
| Tricia et al ⁽¹⁴⁾ | 49.2 |
| Badar et al ⁽¹²⁾ | 49.2 |
| Oa Oguntayo et al ⁽¹⁵⁾ | 44.5 |
| Srivani et al ⁽⁴⁾ | 40-50 |
| Dhakal et al ⁽¹⁰⁾ | 40-50 |

Cervical intraepithelial neoplasia was most commonly seen in 31-40 years of age (12 out of 24 cases 50%) with CIN 1 being the most common finding. This study however did not correlate with study of purnima poste et al¹⁶ where CIN was most commonly seen in 41-50 years of age with CIN 2 being the most common finding.

Hyperplasia, squamous metaplasia constituted the remaining cases. This was an expected finding and correlated with the other studies.

Conclusion

1. This study demonstrated that inflammatory lesions (Chronic non specific cervicitis and papillary endocervicitis) were the most common non neoplastic findings (48.07%) followed by carcinoma cervix (34.6%) which was most commonly detected in 41-50 years of age.
2. This study highlights a wide spectrum of histopathological subtypes of carcinoma of cervix. Decisions affecting clinical management, treatment and follow up are often based on histopathological diagnosis regarded as "gold standard". The spectrum of cervical lesions are vast and therefore

early detection and management of certain lesions can help in reducing the morbidity.

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