IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 4 Ver. 12 (April. 2018), PP 28-30
www.iosrjournals.org

Diagnosis of Cervical Carcinoma on Histopathological Examination of Cervical Biopsy Specimen– An Institutional Based Study

Dr. Abhishek Verma[1], Dr. Niraj Prasad[2], Dr. Ramesh Kumar Srivastava[3]
[1]*Tutor, Department Of Pathology, Rims, Ranchi, Jharkhand, India*
[2]*Postgraduate Student, Department Of Pathology, Rims, Ranchi, Jharkhand, India*
[3]*Professor And Head, Department Of Pathology, Rims, Ranchi, Jharkhand, India*
Corresponding Author: Dr. Niraj Prasad

Abstract
Introduction: *Worldwide, cervical carcinoma is the most common malignancy of the female genital tract and represents the second most common malignancy in women following breast cancer (and excluding skin cancer). Evidence exists supporting the association of early marriage, multiparity, having multiple sexual partners, and low economic level with a high incidence of cervical carcinoma.*
Materials and Methods: *This Retrospective study is done in department of pathology, RIMS, Ranchi from January 2017 to December 2017. It included all cervical biopsies which were sent to histopathology section.*
Results: *Histopathological examination of total 96 cervical biopsy specimen were done out of which 63 cases were diagnosed to have malignant lesions All age groups are included. Highest prevalence of cervical carcinoma was seen in 61-70yrs of age group and least prevalence was seen in 11-20yrs of age group.*
Conclusion: *The utility of cervical biopsy in diagnosing and evaluating the cervical carcinoma is quite established and well proven with high degree of accuracy. Cervical biopsy with detailed history is an accurate diagnostic tool and should be used commonly as a confirmatory tool to diagnose cervical carcinoma at suspicious cases.*
Keywords: *Cervical biopsy, cervical carcinoma*

Date of Submission: 07-04-2018 Date of acceptance: 23-04-2018

I. Introduction

Worldwide, cervical carcinoma is the most common malignancy of the female genital tract and represents the second most common malignancy in women following breast cancer (and excluding skin cancer). Although formerly regarded as a disease of older patients, cervical carcinoma is now often encountered in the third to fifth decades.[1] Evidence exists supporting the association of early marriage, multiparity, having multiple sexual partners, and low economic level with a high incidence of cervical carcinoma.[2] The single most important factor is probably age at first intercourse.[3] This tumor has a low incidence in Jewish women and is practically nonexistent in nuns.

II. Materials and Methods

This Retrospective study is done in department of pathology, RIMS, Ranchi from January 2017 to December 2017. It included all cervical biopsies which were sent to histopathology section. Tissues were sent in multiple bits and were submitted entirely for H & E staining. Total of 96 case are studied. The detailed history was provided by the clinicians along with the specimens which were sent.

III. Results

A total of 96 specimens of cervical biopsies were received during a span of 1year of which 63 were diagnosed to have cervical carcinoma. Among all the specimens 23.96% cases were diagnosed to have benign lesion, 10.41% cases were diagnosed to have dysplastic lesions and 65.63% cases were diagnosed to have malignant lesions. All age groups were included. Most specimens were received from 41-50yrs of age group. Among benign lesions chronic cervicitis was most common. Highest prevalence of cervical carcinoma was seen in 61-70yrs of age group and least prevalence was seen in 11-20yrs of age group. Total 63 cases were diagnosed of having malignant lesion out of which 11 (17.46%) were well differentiated squamous cell carcinoma, 38 (60.32%) were moderately differentiated squamous cell carcinoma, 13 (20.63%) were poorly differentiated squamous cell carcinoma and 1 (1.59%) case was adenocarcinoma.

Table1- Analysis of different cervical lesions in different age groups.

AGE	BENIGN LESION	DYSPLASIA	Malignant lesion	Percentage of malignant lesion
<10yrs	nil	NIL	NIL	_
11-20yrs	1	Nil	nil	0%
21-30yrs	5	Nil	1	16.67%
31-40yrs	3	3	10	62.50%
41-50yrs	6	2	19	70.37%
51-60yrs	4	3	18	72.00%
61-70yrs	4	1	14	73.68%
>70yrs	Nil	1	1	50.00%

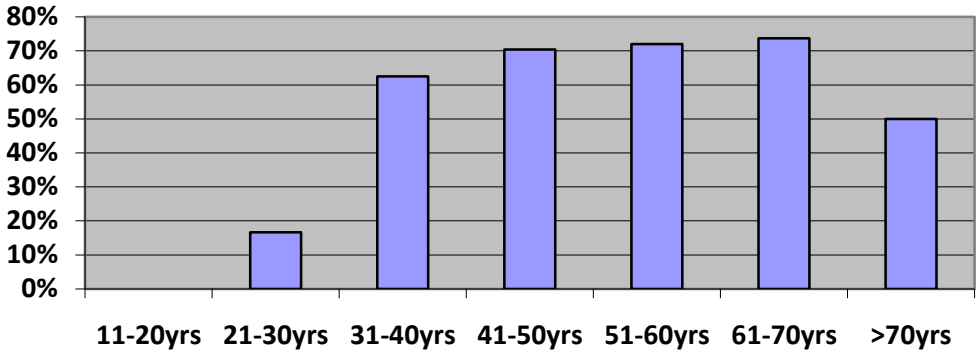

Figure 1 comparision of percentage of malignancy among different age groups

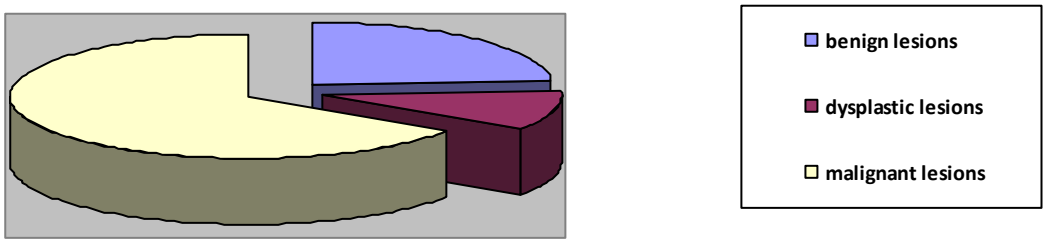

Figure 2 Pie diagram representing percentage of benign, dysplastic and malignant lesions

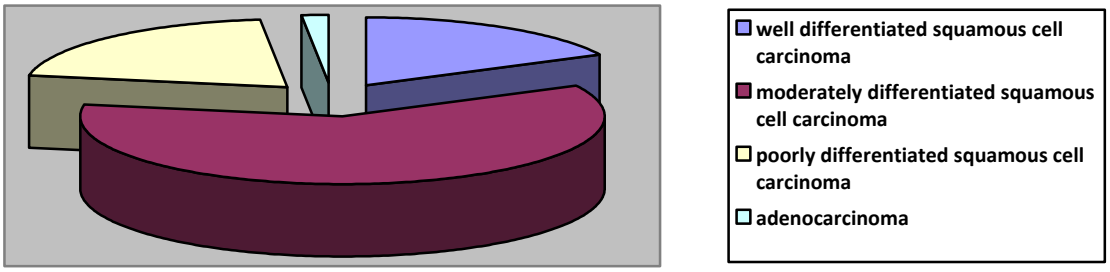

Figure 3 Pie diagram representing percentage of different types of malignant lesions.

IV. Discussion

A large majority of cervical carcinomas has been diagnosed in post-menopausal age group.Colposcopic cervical biopsy specimens are small pieces of mucosa and superficial stroma that are taken, most often, from acetowhite areas identified visually. Documentation of number and size of tissue fragments are important to

ensure that the biopsy specimen are represented adequately on the slide. Microscopically, cervical carcinomas can be squamous cell carcinoma, adenocarcinoma, adenosquamous carcinoma, neuroendocrine carcinoma. Patients with invasive squamous cell carcinoma of the cervix most commonly present with abnormal vaginal bleeding or abnormal Papanicolaou smear.[4] Multiple histological variants of squamous cell carcinoma such as keratinizing, large cell non-keratinizing, poorly differentiated (small cell) nonkeratinizing, basaloid, verrucous , warty (condylomatous), papillary, lymphoepithelial like are there.[1] HPV infection is causally related to development of squamous cell carcinoma, particularly HPV16 (greatest risk). In contrast to many other human malignancies , the TP53 gene is rarely mutated in cervical squamous cell carcinoma. Despite the lack of mutation of TP53, its function is still inactivated due to the effect of HPV- associated E6 protein which binds to P53 protein causing its rapid degradation.[5]

Among the benign lesions chronic cervicitis was most common lesion and among malignant lesions squamous cell carcinoma was most common lesion as seen in other study done by Sathiyakala Rajendiran et al.[6] The percentage of different types of malignant lesions was similar to study done by Sneha Saini and S.R. Kanetkar.[7]

V. Conclusion

The utility of cervical biopsy in diagnosing and evaluating the cervical carcinoma is quite established and well proven with high degree of accuracy. Cervical biopsy with detailed history is an accurate diagnostic tool and should be used commonly as a confirmatory tool to diagnose cervical carcinoma at suspicious cases. Cervical carcinoma awareness including common risk factors that can be prevented and health camps to be organized often to screen women cervical carcinoma.

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