ORIGINAL RESEARCH PAPER
Volume-6 | Issue-12 | December-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 93.98
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

FOUR YEAR RETROSPECTIVE STUDY OF CERVICAL CANCER IN A TERTIARY CARE CENTRE

Pathology

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ABSTRACT

Cancer of the cervix uteri is the most common cancer among women In India .Although screening procedure like pap smear is being employed for early detection ,cancer cervix remains as one of leading cause of death in female malignancies..The association of several risk factors including promiscuity, multiple sexual partners, and intercourse at an early age, oral contraceptives, smoking and infection by human papillomavirus are well known in the developmentof invasive cervical cancer. The present retrospective clinico pathological study is undertaken to analyse the clinical presentation, age incidence and histomorphological pattern of carcinoma cervix.

MATERIALS AND METHODS: During the four year period of study (June 2009 to October 2013) ,a total of 173 cervical biopsies, which were diagnosed as invasive carcinoma of cervix in the Department of Pathology, in a tertiary care hospital, were included in the study. Four micrometer thickness sections from paraffin embedded blocks were subjected to routine Haematoxylin and Eosin staining procedure. The data was analyzed for the age incidence, clinical presentation, histopathological types of carcinoma cervix .

RESULTS: Out of 173 cases of invasive cervical carcinoma analyzed 163 cases were of Squamous Cell carcinoma (94.21%) out of which large cell nonkeratinising SCC account for 95.3% & Large cell keratinizing account for 4.70% of cases .Seven cases of (4.04%) of adenocarcinoma and one case of glassy cell carcinoma and two cases of adenosquamous were also encountered. The highest incidence of carcinoma cervix was in the fourth to fifth decade with bleeding with white discharge per vaginum as the most common presenting complaint.

CONCLUSION: INDIA has a huge burden of cancer cervix and a multipronged screening modalities like conventional Pap, Liquid based cytology and HPV DNA testing are necessary to prevent and remove this scourge from our country

KEYWORDS

INTRODUCTION

Cancer of the cervix uteri is the second most common cancer among women worldwide. About 86% of the cases occur in developing countries, representing 13% of female cancers. In India it stands first among the cancer in women population.The association of several risk factors which include promiscuity, multiple sexual partners, and intercourse at an early age, oral contraceptives, and smoking was demonstrated by epidemiological studies. Current molecular-epidemiological studies strongly support, the infection by human papillomavirus is the primary risk factor playing a central role in the development of invasive cervical cancer. The present clinico pathological study is undertaken to analyse the clinical presentation, age incidence and histomorphological pattern of carcinoma cervix

MATERIALS AND METHODS

During the four year retrospective study (June 2009 to October 2013) ,a total of 173 cervical biopsies, which were diagnosed as invasive carcinoma of cervix in the Department of Pathology, in a tertiary care hospital, were included in the present study.The specimens included, cervical punch biopsies, endocervical curettage and hysterectomy specimens. Clinical details with reference to age and presenting complaint were recorded.Four micrometer thickness sections from paraffin embedded blocks were subjected to routine Haematoxylin and Eosin staining procedure. The data was analyzed for the age incidence, clinical presentation, histopathological types of carcinoma cervix .

RESULTS

During the period of study (June 2009 to October 2013) ,a total of 949 cervical biopsies were received in the central lab of our institute out of which 173 were diagnosed as invasive carcinoma of cervix .

AGE INCIDENCE:

In the present study, the youngest patient was 21 years of age and the oldest patient was 80 years [MEAN Age of 45.6 years, MEDIAN Age of 45 years]. Maximum incidence of cervical carcinoma was found in fourth and fifth decade, and maximum incidence of adenocarcinoma was in the fourth decade (Table 1).

TABLE 1: CARCINOMA CERVIX -AGE INCIDENCE

S.No	Age | Group (years) |	No of cases (n=173)	Squamous Cell Carcinoma	Adeno carcinoma	Small Cell carcinoma	OTHERS
1	21-30	4(2.13%)	4		-	-
2	31-40	34 (25.9%)	24	3	-	
3	41-50	62 (35.83%)	62	4	-	1(glassy cell)0.57%
4	51-60	41 (29.47%)	51		-	2(adeno squamous)1.1%
5	61-70	26 (15.8%)	26	-	-	-
6	>70	6 (0.8%)	6	-	-	

CLINICAL PRESENTATION:

In the present study, out of 173 patients with invasive cervical carcinoma, white discharge with bleeding per vaginum was the most common presentation in 68 cases (41.63%,Table 2) followed by only bleeding PV 53 cases (30.63%,Table 2) and only white discharge was seen in 48 cases (27.74%,Table 2). Among the patients with bleeding per vaginum, post menopausal bleeding was the major presenting complaint (61.40%) followed by dysfunctional uterine bleeding (38.60%) and post coital bleeding (1.75%)

TABLE 2: CLINICAL PRESENTATIONS OF CARCINOMA CERVIX

S. No	Clinical Presentations.	No. Of Cases (n=173) %	Squamous Cell Carcinoma (n=163)	Adeno carcinoma N=7	Others Glassy cell Adenosquamous N=3
1	Bleeding P/V	53 (30.63%)	-		-
	i) PMB	32 (61.40%)	31	1	-
	ii) DUB	21 (38.60%)	18	1	2
2	White Discharge	48(27.74 %)	47	1	—
3	White discharge + Bleeding PV	68 (41.63%)	66	1	1

HISTOMORPHOLOGICAL SPECTRUM OF CERVICAL CARCINOMA

In the present study,squamous cell carcinoma was the most common type encountered accounting for 163 cases(94.21%,Table 3).Large cell non-keratinizing type of squamous cell carcinoma was predominant type of squamous cell carcinoma with 155 cases (95.3%,Table 3).This type of carcinoma showed individual cell keratinization and only a little keratin formation. Keratin pearls were not seen. Cellular and nuclear pleomorphism and mitotic figures were seen.Large cell keratinizing type of squamous cell carcinoma was present in 8 cases (4.6%,Table 3). Keratinizing Squamous cell carcinoma was composed of circular whorls of cells with central nests of keratin. The nuclei were large and hyperchromatic with coarse chromatin. Mitotic figures were not seen.

Adenocarcinoma was the second most common type of cervical cancer in present study series with7 cases (2.5%,Table 3) .The tumors were composed of variably sized papillary and villous fibrovascular fronds.The glands were lined by mucinous cells including goblet cells. The papillae were lined by stratified columnar cells showing mild to moderate nuclear atypia and had central fibrovascular core. One case of glassy cell carcinoma and two case of adenosquamous carcinoma was encountered in third and sixth decade respectively.

TABLE 3: HISTOPATHOLOGICAL TYPE OF CARCINOMA CERVIX

S. No	Histopathological types of Carcinoma cervix	Number of cases (n = 173cases)
1	Squamous cell carcinoma	163
A	Large cell nonkeratinizing	155 cases (95.3%).
B	Large cell keratinizing	8 cases (4.6%)
2	Adenocarcinoma	7(2.5%)
3	Glassy cell carcinoma	1 (0.4%)
4	Other (Adenosquamous)	2 (0.4%)

DISCUSSION

Carcinoma cervix is the second most common malignant tumor in the world in women and is the most common cancer in Indian women. It is the leading cause of death in women in the developing countries. In India, about 134,000 cases develop cancer cervix every year. It accounts for approximately 16% of world's annual incidence. The age-standardized incidence range from 17.5 to 55 per 100000 women in different regions of India.[1] More than 80% of the cases are diagnosed at an advanced clinical stage and five-year survival is less than 40% .

AGE INCIDENCE:

The 25th annual report of FIGO, published in 2003, states majority of women affected by cancer cervix were between 40 to 60 years of age.[3] In the present study, the age group ranges from 21-80 years among the patients with squamous cell carcinoma, with maximum incidence in the fourth to fifth decade (35.83%) [Mean age - 45.5years and Median age - 45 years], which is in accordance with studies done by victor et al & ramdas et al.[2,4] In the present study the adenocarcinoma cervix patients had median age of 49 yrs which was similar to study done by miller et al[5].

CLINICAL PRESENTATION:

BLEEDING PER VAGINUM:

In the present study, abnormal vaginal bleeding with white discharge was the major presenting complaint in 68 cases (41.63%) which was comparable with the study of Brigitte E miller et al (1993)[5], Uzoigwe SA et al (2004)[6] and Olatunji AO et al [7].

WHITE DISCHARGE:

In the present study, it was the major third presenting complaint in 48 cases (27.74%) which was almost similar to studies done by Brigitte E miller et al[5], JS Mishra et al (2002)[8].

Histopathological types of cervical carcinoma:

The major histopathological type of carcinoma cervix in the present study was Squamous cell carcinoma followed by adenocarcinoma and other types .Similar observations were made in the studies by Moubayed P **el** al (1994)[9] and Veenakashyap et al (2000).[10]Heidi J. Gray et al(2002)[11] in clinicopathological study of 403 cases of invasive cervical carcinoma found a incidence of 5.4%of glassy cell carcinoma. According to Benjamin piura et al[12] ,the incidence of glassy cell carcinoma was found to be around 1-2% of all cervical cancers. In our study the incidence was found to be around 1.75% .

CONCLUSION

In the present study, cancer cervix was commonly encountered in 4-5th decade and bleeding with white discharge was the most common presenting symptom.The most common histological type was squamous cell carcinoma of which large cell non keratinizing type accounted for 95.3% and keratinizing squamous cell carcinoma for 4.70%.Adenocarcinoma was the second most common histological type.

In conclusion, INDIA has a huge burden of cancer cervix and a multipronged screening modalities like conventional Pap, Liquid based cytology and HPV DNA testing are necessary to prevent and remove this scourge from our country.

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