Clinicopathological Correlation of Cervical Carcinoma: A Tertiary Care Hospital Based Study in Rural Gujarat

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Abstract

Introduction: Cancer of the uterine cervix is one of the leading causes of cancer death among women worldwide. In India, it ranks as second leading cause next to breast cancer in women. *Aims*: To study the clinical presentation of cervical carcinoma correlating with histopathological findings in the Charutar area of Gujarat state at Shree Krishna Hospital, Karamsad. *Methods and Material*: 68 specimens received from 15 April 2015 to 14 April 2016 with clinical suspicion of cervical carcinoma and histopathologically confirmed were considered for study. Clinical details of the patients were noted with the help of semi-structured proforma. Statistical analysis used: The data was Statistically analyzed using STATA 14 software. *Results*: Out of 68 confirmed cases for malignancy, 43 (63.24%) had large cell non keratinizing squamous cell carcinoma (LCSCC), 34 (50%) were presented with abnormal bleeding per vaginum, 47 (69.12%) were seen between 41-60 years, 66 (97.06%) were multiparous, 48 (70.59%) had poor genital hygiene, 42 (61.76%) were illiterate, 44 (64.70%) were from low economic class, only 03 (4.41%) had history of cervical cancer screening. *Conclusion*: The most common cervical cancer in this region of India is squamous cell carcinoma. Majority patients had complained of bleeding per vaginum, between 41-60 year, multiparous, had poor genital hygiene & illiterate. The study concludes that screening of cervical cancer should be emphasised in women especially in rural areas for early detection of cancer and reduce mortality and morbidity in productive age.

Keywords: Cancer; Awareness; Mortality; Hygiene; Screening.

Introduction

Cancer of the uterine cervix is one of the leading causes of cancer death among women worldwide and is the fourth most common cancer in women and seventh most common cancer overall. In India, 134,000 were detected to have cervical cancer, out of which 72,825 women died of cervical cancer in 2008. The Indian age standardised rate is 27/100,000 population [1]. According to Surendra Shastri, 141 768 new cases and 77 096 deaths due to cervical cancer occurred in India in 2010 [2]. Cervical cancer occurs early and strikes at the productive period of a woman's life. The cancer mostly affects middle-aged women between 40 and 55 years, especially those from the lower economic

status who fail to carry out regular health check-up due to financial constraints [3]. Hygiene and lifestyle are two key reasons in rural women for being more vulnerable to this cancer [4]. Epidemiological study shows that cervical cancer behaves like a sexually transmitted disease and roughly 50% of cervical cancer worldwide is associated with the oncogene HPV 16 [5]. The other important high risk HPV types are 18, 45 and 31. Cervical cancer usually develops very slowly. It starts as a precancerous condition called dysplasia/intraepithelial neoplasia. This precancerous lesion can be detected by Pap smear and is 100% treatable. It takes years for precancerous lesion to transform into cervical cancer. Cervical cancer can be cured when detected early. With improved technology it is usually detected at a very early stage. Most women who are diagnosed with cervical cancer today have not had regular Pap smear screening or they have not followed up on abnormal Pap smear results [6]. Most of the time, early cervical cancer has no symptoms. We have undertaken this study to know

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the clinical presentation of cervical carcinoma correlating with histopathological findings in a tertiary hospital situated in Charutar area of Gujarat of India which caters mainly the rural population.

Inclusion Criteria

Cases which were clinically suspected and whose biopsy along with required history recorded in given proforma sent to histopathology department and diagnosed histopathologically as having cervical carcinoma or lesions having potential to progress to carcinoma were considered for the study.

Exclusion Criteria

Cases which were clinically suspected but histopathologically not diagnosed as having cervical carcinoma or lesions having potential to progress to carcinoma were excluded from this study

Materials and Methods

After institutional ethics committee approval the cases were collected from a tertiary hospital, Karamsad Dist.anand state. Gujarat over a period of 15 april 2015 to 14 april 2016 one year.

A total number of 100 clinically suspected cases of cervical carcinoma were considered for the study out of which 68 cases were histopathologically diagnosed as having cervical carcinoma. Details of the patients were taken with the help of semi-structured proforma that included sociodemographic details, history of present illness, menstrual history, systemic examination and local per speculum findings. The data was analysed by descriptive analysis using STATA14 SPSS software.

Results

The cases were analysed for histopathological type, age, parity, presenting symptoms, clinical diagnosis. Total 100 clinically suspected cases of cervical carcinoma were considered for the study out of which 68 cases were histopathologically diagnosed as having cervical carcinoma. Majority of cases observed were of large cell non keratinizing squamous cell carcinoma (63.24%) followed by small cell carcinoma (06 cases) adenocarcinoma three cases (Figure 1).
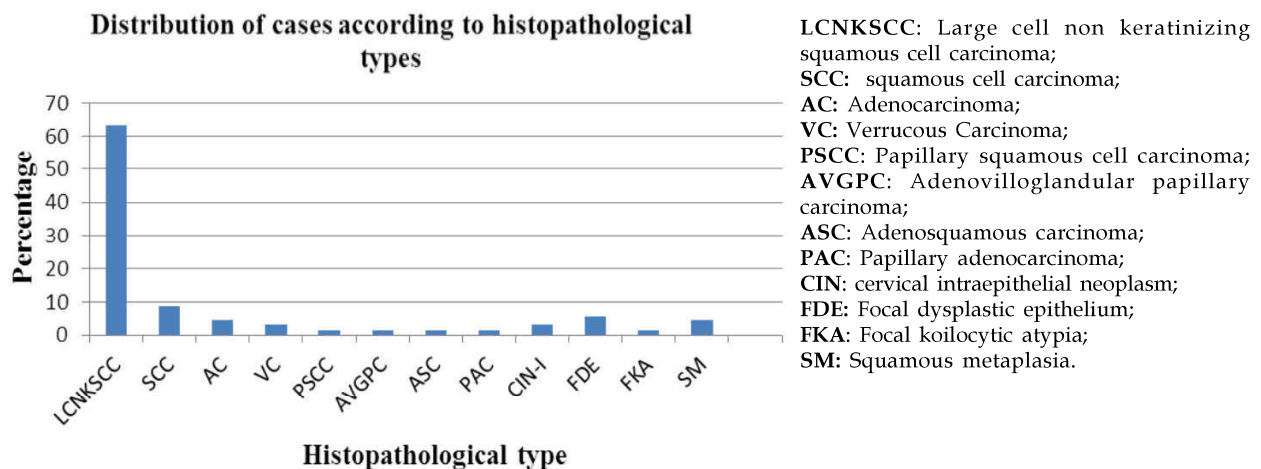

LCNKSCC: Large cell non keratinizing squamous cell carcinoma;
SCC: squamous cell carcinoma;
AC: Adenocarcinoma;
VC: Verrucous Carcinoma;
PSCC: Papillary squamous cell carcinoma;
AVGPC: Adenovilloglandular papillary carcinoma;
ASC: Adenosquamous carcinoma;
PAC: Papillary adenocarcinoma;
CIN: cervical intraepithelial neoplasm;
FDE: Focal dysplastic epithelium;
FKA: Focal koilocytic atypia;
SM: Squamous metaplasia.

Fig. 1: Bar Diagram Showing Distribution of Histological Types of Carcinoma Cervix

Table 1: Shows Age Distribution in Various Histological Types of Cervical Cancer

Age in years	Number of cases	Percentage
21-30	3	4.41
31-40	6	8.82
41-50	26	38.24
51-60	21	30.88
61-70	11	16.18
71-80	1	1.47
Total	68	100

Maximum cases were observed in age group of 41-50 years (38.24%) followed by 51-60 years (30.88%). (Table 1).

Maximum number of cases was noted in women who had 3 and above children. Hence it was obvious that multiparty (more than three) is a significant risk factor for carcinoma cervix (Table 2).

The majority of the cases were presented with abnormal bleeding per vaginum (50%) followed by foul smelling vaginal discharge (13.24%) (Table 3).

Table 2: Shows Distribution of Parity in Cervical Carcinoma

Parity	Number of Cases	Percentage
1-3	41	60.29
4-6	26	38.24
7	1	1.47
Total	68	100

Table 3: Shows Clinical Signs in Various Histopathological Types of Cervical Carcinoma

Clinical presentation	No of cases	Percentage
Bleeding per vaginum (BPV)	34	50
Foul smelling vaginal discharge (FSVD)	9	13.24
Bleeding per vaginum,Foul smelling vaginal discharge (BPV,FSVD)	4	5.88
Bleeding per vaginum,Lower abdominal pain (BPV,LAP)	3	4.41
Bleeding per vaginum, Foul smelling vaginal discharge,Lower abdominal pain (BPV,FSVD,LAP)	3	4.41
Bleeding per vaginum, Leucorrhoea(BPV,LEU)	1	1.47
Leucorrhoea,Lower abdominal pain (LEU,LAP)	1	1.47
Foul smelling vaginal discharge,Lower abdominal pain (FSVD,LAP)	3	4.41
Leucorrhoea (LEU)	6	8.82
Something coming out from vagina (SCOV)	4	5.88
Total	68	100

All most all cases which were clinically suspected to be malignant were diagnosed as carcinoma by histopathology.

Discussion

Cervical carcinoma is a major cause of cancer related morbidity and mortality in women worldwide. In India, it is the second most common cancer only next to breast cancer. In the west, early detection through regular screening has significantly controlled the prevalence of this disease, thereby, lowered its incidence. There is a great diversity between urban and rural India when it comes to cervical cancer.[7]Incidence of cervical cancer in urban India is decreasing because of more awareness in urban educated women.

According to Gujarat Cancer Registry, which register the number of cancer cases, around 17,500 men and 12,000 women fall prey to the deadly disease every year. Cancers of the mouth, lung, food-pipe, prostate and larynx are most prevalent among men, where as cancers of the breast, cervix, ovary and food pipe are most common in women. The incidence of cervix uteri is 15.11% in Gandhinagar, Gujarat India near where this study was conducted [8]. In urban, cervical cancer account for about 40% of cancers in women while in rural areas it accounts for 65% of cancers. Woman's sexual habits can increase risk for cervical cancer as having sex at an early age, having multiple sexual partners or partners who participate in high-risk sexual activities [9].

Majority of cervical cancers are squamous cell carcinomas. These lesions arise from the squamocolumnar junction and may be keratinizing or non-keratinizing type (well differentiated to poorly differentiated carcinoma) [10]. Studies have shown that 85-90% of cases of cervical carcinoma are squamous cell carcinoma and rest of them constitutes adenocarcinoma. [11]Adenocarcinoma of the uterine cervix arises from the endocervical columnar cells and account for about 14% of cervical carcinomas. In the present study 97.9% cases were squamous cell carcinoma of which majority 43 cases (63.24%) were Large cell nonkeratinizing squamous cell carcinomas. Adenocarcinoma constituted only 4.41% of cases (Figure 1).

According to present study (Table 1), maximum number of cases was found in the age group of 40-59 years. Many studies have observed maximum cases in older women beyond 40 years of age [12]. The most common age group involved in carcinoma cervix ranged from 35-50 years [13]. One study reported that

the incidence rises in 30-34 years of age and peaks at 55-65 years, with a median age of 38 years [14].

According to present study multiparity (>4 children) showed increased risk of malignancy when compared to less number of children. Studies show that women having four and above children has increased risk of malignancy [15]. One study showed that women with 3 or more births showed 1.51 increased odds ratio to carcinoma cervix [16]. Both adenocarcinoma and squamous cell carcinoma has relation to parity of three or more [17]. Most of the time, early cervical cancer has no symptoms. Vaginal bleeding, contact bleeding or rarely vaginal mass may be the presenting feature. Also, moderate pain during sexual intercourse and vaginal discharge are symptoms of cervical cancer. In advanced disease, metastases may be present in the abdomen, lungs.

Conclusion

This study concludes that:

1. The Large cell nonkeratinizing squamous carcinmoma is the most common type in the Charutar region of Gujarat, India. Illiteracy, poor genital hygiene and low economic class were observed in majority of cases. This study suggests that the most effective available measure to reduce the incidence of cervical cancer is its early detection in and treatment in precancerous stage by regular cervical cancer screening.

Limitation of Study: Small sample size

Financial Support and Sponsorship: Nil.

Conflicts of Interest: There are no conflicts of interest.

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