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Original Research Article

Clinical profile of patients presented with esophageal carcinoma in tertiary care teaching medical college of Gujarat, India

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ABSTRACT

Background: Esophageal cancer is associated with multiple risk factors and associated with poor prognosis. Incidence of Esophageal cancer is increases now a days and it became a sixth leading cause of cancer related death in world. The purpose of this study was to know the clinical profile of patients of esophageal cancer in a tertiary care teaching hospital of Gujrat, India.
Methods: This is a retrospective hospital record based study for a period of 2015 to 2018 in which 103 patients with endoscopic biopsy confirmed cases of esophageal cancer were analyzed for clinical profile.
Results: Esophageal cancer was most common in low socioeconomic men (66%) of 5th decades (26.21%) associated with tobacco chewing (64.07%) as a major risk factor and dysphagia (86.76%) as most common presenting feature. Most common type and involvement were sqamous type (72.81%) and distal third (50.48%) part of the esophagus respectively.
Conclusions: Primordial prevention and screening of patients may decrease mortality related to esophageal carcinoma.

Keywords: Clinical profile, Esophageal cancer, Endoscopic biopsy

INTRODUCTION

In recent global health scenario cancer is becoming a major cause of morbidity and mortality in all part of the world. Esophageal cancer constitutes eighth most common cancer and sixth most common cause of cancer related death in world.[1,2] Incidence rate of esophageal cancer in India is 6.5 per 1,00,000 population for males and 4.2 per 1,00,000 population for females.[3] Most common type is squamous type in developing countries like India while incidence of adenocarcinoma is increasing in developed countries.[4,5] Risk factors associated with squamous cell carcinoma is alcohol abuse, tobacco addiction and poor nutrition.[6,7] Most common gastrointestinal cancer in North East region of India is esophageal cancer.[8] The Upper GI Endoscopy with histopathological biopsy is remains the gold standard for diagnosis of esophageal carcinoma. We have done retrospective study of biopsy proven esophageal cancer patients to know the clinical profile, prevalent risk factors and type of cancer in western India.

METHODS

This was a retrospective hospital record-based study carried out in Department of Medicine, Dhiraj Hospital, affiliated with SBKS Medical Institute and Research Centre, Vadodara, Gujrat, India. This is a tertiary care teaching Hospital and Endoscopy is routinely done here under the Department of Medicine.

Inclusion criteria

Data was collected from all those 103 patients who underwent Upper GI Endoscopic biopsy followed by histopathological confirmed esophageal cancer from January 2015 to September 2018 and then analyzed according to age, sex, risk factors, presenting symptoms and sign, their finding on UGIE like tumor location and histopathological type of cancer respectively.

Exclusion criteria

Endoscopic biopsy of patients not having esophageal cancer.

Statistical analysis

Appropriate standard statistical tests.

Endoscopic method

Diagnosis of esophageal cancer is done by upper endoscopy with mucosal biopsy. In upper endoscopic view squamous cell carcinoma was seen as exophytic or ulcerated lesion with irregular margin while adenocarcinoma was appeared as nodular or flat patches. Multiple biopsy increases the sensitivity of diagnosis of esophageal cancer by 96%.[9] A minimum six to eight biopsy was taken from the margin and centre of the esophageal lesion.

Histo-pathological method

Biopsy sample obtained after upper endoscopic was fixed in formalin and was sent immediately to pathology laboratory with full clinical information and site of the lesion.

Squamous cell carcinoma

Biopsy specimen showed diffuse infiltrating sheets and nests of small round or oval cell with minimal cytoplasm and hyperchromatic nuclei with fine granular chromatin.

Adenocarcinoma

It was diagnosed by presence of irregular glands with cuboidal-columnar epithelium, prominent nucleoli with coarse chromatin in nuclei.

Undifferentiated carcinoma

It showed no ductal or squamous epithelial structure to indicate definite differentiation.

RESULTS

Out of total 103 patients esophageal carcinoma on biopsy, 68 cases (66.01%) were males and 35 cases (33.98%) were females. Male to female ratio was 1.94. Age wise analysis showed most cases 27 (26.21%) occurred in 51-60 year age group followed by 23 (22.33%) in 61-70year age group, 22 (21.35%) in 41-50 year age group,15 (14.56%) each in both age group 31-40 year and >70 year age group respectively.

Table 1: Age and sex distribution.

Age	Male	Female	Total
18-30	01 (1.47%) (100%)	00 (0%)	01 (0.97%)
31-40	06 (8.82%) (40%)	09 (25.71%) (60%)	15 (14.56%)
41-50	15 (22.05%) (68.18%)	07 (20%) (31.81%)	22 (21.35%)
51-60	20 (29.41%) (74.07%)	07 (20%) (25.92%)	27 (26.21%)
61-70	15 (22.05%) (65.21%)	08 (22.85%) (34.78%)	23 (22.33%)
>70	11 (16.17%) (73.33%)	04 (11.42%) (26.66%)	15 (14.56%)
Total	68 (100%) (66.01%)	35 (100%) (33.98%)	103 (100%)

In 27 patients of 51-60 year age group, 20 (74.07%) were males and 07 (25.92%) were females. Out of 23 cases of 61-70 year age group,15(65.21%) were males, 08 (34.78%) were females. In 41-50 year age group, 15 (68.18%) were males and 07 (31.81%) were females. A total of 15 patients in each group 31-40 year and >70 year age group contained 06 (40%) males, 09 (60%) females and 11 (66.01%) males, 04 (33.98%) females respectively. Only 1 male was diagnosed in 18-30 year age group. Frequency distribution of esophageal carcinoma in different age group was analysed in male and female subgroups. Almost two thirds of male patients developed esophageal carcinoma after 50 years of age, while significant number of female patients (45%) developed esophageal carcinoma in middle age (Table 1).

Most common presenting symptoms in all patients age and sex groups was dysphagia 90 (87.37%) in both males 59 (86.76%) and females 29 (82.85%) followed by upper GI bleed in 09 (8.73%), anemia in 04 (3.88%) and malena in 02 (1.94%) patients (Table 2).

Table 2: Patients complain.

Symptoms	Male(68)	Female(35)	Total(103)
Dysphagia	59(86.76%)	29(82.85%)	90(87.37%)
UGIB	05(7.35%)	04(11.42%)	09(8.73%)
Anemia	02(2.94%)	02(5.71%)	04(3.88%)
Malena	02(2.94%)	00(0.0%)	02(1.94%)

Tobacco chewing was found to be the most common risk factors in this study, in almost two thirds 65 (63.10%) of the patients, 44 (64.70%) males and 21 (60%) females. It is commonest risk factor in female population also. In 44

(42.71%) of total patients had habit of smoking either bidi, cigarette or both, 26 (38.23%) males and 18 (51.42%) females. Chronic bidi smoking was also reported as common risk factor in female also. Chronic alcohol consumption is the second commonest risk factor in male subgroup. It was found in 37 (35.92%) patients 31 (45.58%) males and 6 (17.14%) females (Table 3).

Table 3: Risk factors.

Type	Male (n=68)	Female (n=35)	Total (n=103)
Tobacco chewing	44 (64.70%)	21 (60.0%)	65 (63.10%)
Smoking (Bidi/Cigarette/ Both)	26 (38.23%)	18 (51.42%)	44 (42.71%)
Alcohol	31 (45.58%)	06 (17.14%)	37 (35.92%)

On analysis of site of esophageal carcinoma lower third of the esophagus was most common site of disease was found in both sexes accounting for 52 (50.48%) of total patients with 35 (51.47%) males and 17 (48.57%) females. In 43 (41.74%) of total patients, disease was located in mid third of the esophagus while upper third esophagus is the uncommon site (7.76%) (Table 4).

Table 4: Site of involvement in esophagus.

Location	Male	Female	Total
Upper third	05(7.35%)	03(8.57%)	08(7.76%)
Mid third	28(27.18%)	15(42.85%)	43(41.74%)
Lower third	35(51.47%)	17(48.57%)	52(50.48%)

The most common type of esophageal carcinoma was squamous cell carcinoma 75 (72.81) followed by adenocarcinoma 19 (18.44%). Only 9 (8.73%) had undifferentiated carcinoma. In 75 (72.81%) of total 103 patients 49 (72.05%) males and 26 (74.28%) females had squamous cell carcinoma while adenocarcinoma was found in 13 (19.11%) males and 6 (17.14%) females patients. Frequency distribution of different types in almost similar in both sexes (Table 5).

Table 5: Type of esophageal carcinoma.

Type	Male	Female	Total
Squamous	49 (72.05%)	26 (74.28%)	75 (72.81%)
Adenocarcinoma	13 (19.11%)	06 (17.14%)	19 (18.44%)
Undifferentiated	06 (8.82%)	03 (8.57%)	09 (8.73%)

DISCUSSION

Gastrointestinal cancer presents with a unique pattern of incidence in different part of the globe.[10] Gastrointestinal cancer become the sixth leading cause of death worldwide.[2] In India type of gastrointestinal cancer varies with region. Incidence of esophageal carcinoma is more common in developing and under developing countries relative to developed countries.[11] Eesophageal carcinoma incidence increases with age and this is more common in male (2:1) compare to female.[12] In this study also male to female ratio was 1.94 and three-fourth of the patients was of more than 50 years of age. Sankaranarayanan R et al, found a similar result (M:F=2:1) in his study.[13] In another study done by Sehgal S et al, incidence in male was more than female (2.1:1).[14] Majority of the patients in this study was came from low socioeconomic status and belonging from rural background which was found in other study.[15] More than 80% of the patients in this study was presented with dysphagia as a chief complain early and was also most common indication for upper GI endoscopy. Vishal Gupta et al find same type of presentation in his study.[16]

Most important risk factors associated with esophageal carcinoma are smoking (bidi, cigarette or both), tobacco chewing and misuse of alcohol.[17] Even only one factor is independently related to causation of esophageal carcinoma but when more than one risk factors present in any individual then risk will increase by many more times.[18] In this study, Tobacco chewing was more common in both sexes. Abuse of alcohol was more common in male patients and its effect depends on type of alcohol, daily consumption amount and duration of consumption. Distal third part of esophagus is most common site for adenocarcinoma while sqamous cell carcinoma is most commonly found in distal two thirds. In both sexes, distal thirds 52 (50.48%) followed by middle third 43 (41.74%) was more common found in this study. In another study dony by Giri et al, similar finding was found.[19]

Squamous cell carcinoma is most common esophageal carcinoma in all over world specially in deprived countries. On histopathological analysis of tissue collected from upper GI endoscopic biopsy squamous cell carcinoma (75.81%) was predominant esophageal cancer in this study and its location was either middle or lower third. Adenocarcinoma was diagnosed in 19 (18.44%) patients. Nine patients (8.73%) was diagnosed with undifferentiated type of esophageal carcinoma.

CONCLUSION

Esophageal carcinoma is one of the common gastrointestinal cancer having poor prognosis but its incidence increases with age. This is most common in male >50 years age of low socioeconomic status, and associated with some common habits like smoking, tobacco chewing and alcohol abuse which can be avoided by life style modification, nutrition and changes in habits. Persons with such type of history must be evaluated by UGIE with high suspicion index for early diagnosis. Development of such ominous yet less known

complication of faulty habits can be prevented by social awareness, health education and de-addiction effects. Primordial prevention and awareness about it may decreases the incidence. Screening of elderly person with high risk factors may be helpful in early diagnosis of esophageal carcinoma.

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