

Assessment of Epidemiological Profile of Patients with Esophageal Cancer In a Known Population: An Observational Study

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ABSTRACT

Background: Esophageal cancer is considered a serious malignancy with respect to prognosis and mortality rate. Hence; present study was planned to assess epidemiological profile of patients with Esophageal Cancer in a known population.

Materials & Methods: A total of 50 patients with esophageal cancer were analysed. Complete demographic and clinical profile of all the subjects was assessed. A self-framed questionnaire was used and was filled by all the subjects for obtaining the demographic and epidemiological profile of all the patients. Complete medical history of all the patients was also obtained. All the results were recorded and analysed.

Results: Mean age of the subjects of the present study was 63.8 years. 58 percent of the patients of the present study were males while the remaining 42 percent were females. In the present study, 58 percent of the patients belonged to rural locality, while the remaining 42 percent belonged to the urban locality. 56 percent of the subjects of the present study were illiterate, while the remaining was literate.

Conclusion: Esophageal cancer represents a common form of malignancy affecting a significant proportion of general population. Change in dietary habits and lifestyle pattern contribute as crucial risk factors.


Key words: Epidemiological, Esophageal Cancer.

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INTRODUCTION

Esophageal cancer is considered a serious malignancy with respect to prognosis and mortality rate. Esophageal carcinoma is the eighth most common cancer, and the sixth most common cause of cancer related deaths worldwide with developing nations making up more than 80% of total cases and deaths.¹⁻³

The distribution of tumor types varies according to race: 64% of cases in whites are adenocarcinomas, while 82% are of squamous cell origin among the black population. Interestingly, the incidence among white males has almost doubled while the incidence among blacks has decreased by almost 50%.^{4,5} Tobacco use and a history of mediastinal radiation are risk factors for both tumor types. Other risk factors for adenocarcinoma include gastroesophageal reflux disease (GERD), obesity, and Barrett's esophagus.^{6,7} Hence; present study was planned to assess epidemiological profile of patients with Esophageal Cancer in a known population.

MATERIALS & METHODS

The present study was planned in the Department of Community Medicine, Rajshree Medical Research Institute & Hospital,

Bareilly, Uttar Pradesh (India) and it included assessment of epidemiological profile of patients with Esophageal Cancer. Ethical approval was obtained from institutional ethical committee and written consent was obtained from all the subjects after explaining in detail the entire research protocol. A total of 50 patients with esophageal cancer were analysed. Complete demographic and clinical profile of all the subjects was assessed. A self-framed questionnaire was used and was filled by all the subjects for obtaining the demographic and epidemiological profile of all the patients. Complete medical history of all the patients was also obtained. All the results were recorded and analysed by SPSS software. Univariate regression curve was used for evaluation of level of significance.

RESULTS

In the present study, a total of 50 subjects with esophageal cancer were analysed. Mean age of the subjects of the present study was 63.8 years. Majority of the patients (44%) of the present study belonged to the age group of more than 60 years. 36 percent of the patients of the present study belonged to the age group of 40

to 60 years. 58 percent of the patients of the present study were males while the remaining 42 percent were females. In the present study, 58 percent of the patients belonged to rural locality, while the remaining 42 percent belonged to the urban locality. 56

percent of the subjects of the present study were illiterate, while the remaining was literate. 50 percent of the patients were farmers, while 30 percent were unemployed and 20 percent were employed.

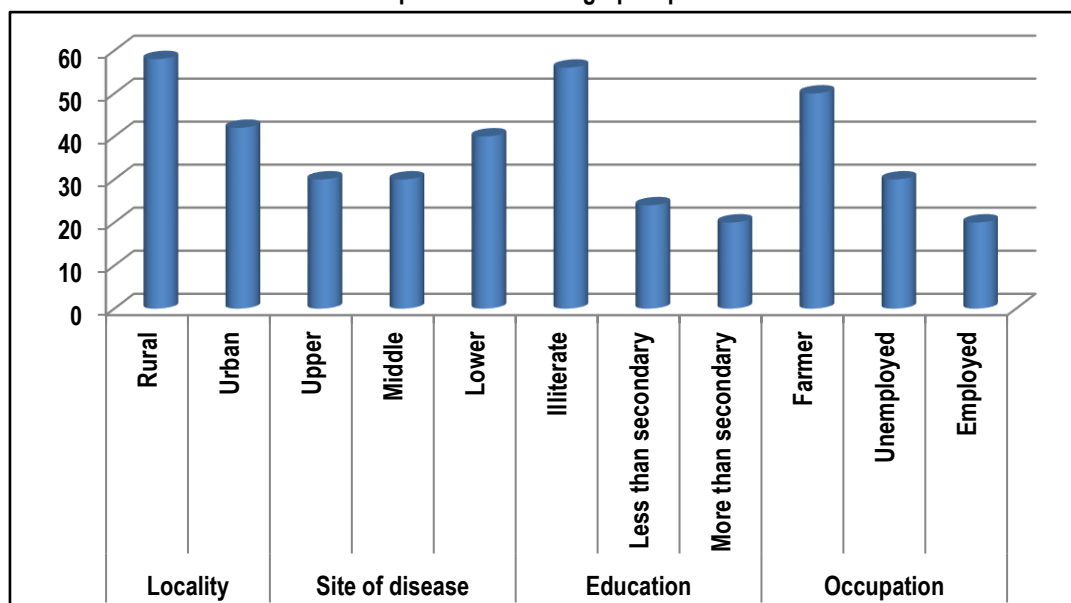
Table 1: Age-wise and gender-wise distribution of the patients

Parameter		Number of patients	Percentage of patients
Age group (years)	Less than 40	10	20
	40 to 60	18	36
	More than 60	22	44
Gender	Males	29	58
	Females	21	42

Table 2: Socio-demographic profile

Parameter		Number of patients	Percentage of patients
Locality	Rural	29	58
	Urban	21	42
Site of disease	Upper	15	30
	Middle	15	30
	Lower	20	40
Education	Illiterate	28	56
	Less than secondary	12	24
	More than secondary	10	20
Occupation	Farmer	25	50
	Unemployed	15	30
	Employed	10	20

Graph 1: Socio-demographic profile



DISCUSSION

Cancer of the esophagus typically occurs in one of two forms, SCCs arising from the stratified squamous epithelial lining of the organ, and adenocarcinomas affecting columnar glandular cells that replace the squamous epithelium. Sarcomas and small cell carcinomas generally represent less than 1%-2% of all esophageal cancers. On rare occasions, other carcinomas, melanomas, leiomyosarcomas, carcinoids, and lymphomas may

develop in the esophagus as well.⁷⁻⁹ SCC is the predominant histologic type of esophageal cancer worldwide. The incidence of squamous cell cancer of the esophagus increases with age as well and peaks in the seventh decade of life. The incidence of squamous cell esophageal cancer is three times higher in blacks than in whites, whereas adenocarcinomas are more common in white men.¹⁰ In the present study, a total of 50 subjects with esophageal cancer were analysed. Mean age of the subjects of

the present study was 63.8 years. Majority of the patients (44%) of the present study belonged to the age group of more than 60 years. 36 percent of the patients of the present study belonged to the age group of 40 to 60 years. 58 percent of the patients of the present study were males while the remaining 42 percent were females. The epidemiology of esophageal cancer has radically changed in the last fifty-years in the Western world. Changes in the predominant type of squamous cell carcinoma (SCC) to adenocarcinoma, disparities between different ethnicities, and the exponential increase in incidence rates of adenocarcinoma have established esophageal cancer as a major public health problem requiring urgent attention specifically in North America.¹¹

Current management of esophageal cancer is mainly based on exhaustive preoperative assessment. The accuracy of the preoperative staging is essential as the decisions of the tumor board regarding the application of multimodal treatment will be directed according to the accuracy and the specifics of the clinical staging assessment.¹⁰

In the present study, 58 percent of the patients belonged to rural locality, while the remaining 42 percent belonged to the urban locality. 56 percent of the subjects of the present study were illiterate, while the remaining was literate. 50 percent of the patients were farmers, while 30 percent were unemployed and 20 percent were employed. Brucher BL et al investigated the incidence of esophageal cancer in a large series of patients with known achalasia, assessed the prevalence of achalasia in patients presenting with esophageal cancer, and evaluated the prognosis of these patients compared to that of patients with esophageal cancer without achalasia. Between 1982 and 1998 a total of 124 patients with primary achalasia were treated and followed at our department. During the same time period 1366 patients presented with esophageal cancer (879 esophageal squamous cell carcinomas, 487 adenocarcinomas). Of the 124 patients with primary achalasia, 4 developed a carcinoma during a mean follow-up of 5.6 years (i.e., an incidence of one carcinoma per 173.6 patient-years of follow-up). Altogether, 13 of 879 patients (1.5%) presenting with esophageal squamous cell carcinoma and 1 of 487 patients (0.2%), presenting with esophageal adenocarcinoma had a history of primary achalasia. Seven patients with achalasia-carcinoma (50%) had early-stage disease (stage I, IIA, or IIB). There was no difference in the prognosis of patients with resected achalasia-carcinoma versus those with esophageal carcinoma but no achalasia. Thus in their population of patients with long-standing achalasia the risk for developing an esophageal cancer was increased about 140-fold over that of the general population. With liberal use of surveillance, carcinoma could often be detected at an early stage in these patients, with a prognosis that was not worse than that of patients with squamous cell esophageal cancer but no achalasia.¹²

CONCLUSION

Under the light of above obtained data, it can be concluded that esophageal cancer represents a common form of malignancy affecting a significant proportion of general population. Change in dietary habits and lifestyle pattern contribute as crucial risk factors. Therefore, further studies are recommended.

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