

CLINICOPATHOLOGICAL CHARACTERISTICS OF CA OESOPHAGUS – EXPERIENCE FROM A TERTIARY CARE CENTRE IN NORTH-EAST INDIA

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ABSTRACT

BACKGROUND

Ca oesophagus is one of the most serious tumours owing to its rapid development and fatal prognosis in most cases. Worldwide, oesophageal cancer ranks eighth in cancer incidence and sixth in cancer mortality.

The objective was to study the patterns of involvement of Ca oesophagus.

MATERIALS AND METHODS

This study has been conducted in the Department of ENT in Tripura Medical College. Details of all the patients with Ca oesophagus who were admitted in the Department of ENT from June 2011 to May 2016 were collected from medical records department and analysed.

RESULTS

All the patients presented with progressive dysphagia and weight loss (100%). Of all the patients, 63.2%, 34.5% and 24.1% patients presented with regurgitation, retrosternal pain and odynophagia respectively. The middle third of oesophagus was most frequently involved (59.8%), followed by lower third (27.6%) and upper third (12.6%). HPE revealed squamous cell carcinoma in 88.5% and adenocarcinoma in 11.5% patients.

CONCLUSION

Oesophageal cancer is quite common in NE India. The peak age of presentation is in the sixth decade of life, and majority of patients present at advanced stage.

KEYWORDS

Ca Oesophagus, Squamous Cell Ca (SCC), Middle Third of Oesophagus.

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BACKGROUND

Ca oesophagus is the sixth most common cause of cancer death worldwide and eighth in cancer incidence.^{1,2} Smoking and alcohol are two important and well known risk factors. The other risk factors are dietary deficiency, chronic irritation, achalasia, diverticulum. In China, Ca oesophagus is associated with diets that are contaminated with mycotoxins and low in antioxidants and micronutrients, whereas in the US tobacco and alcohol consumptions are major risk factors for oesophageal SCC.

The middle third of the oesophagus is the commonest site for SCC while the lower third is the commonest site for adenocarcinoma.³ Most patients present with dysphagia and weight loss. Mortality is very high as majority of patients report in advanced stage and even with operable tumours, postoperative mortality is about 50%.⁴

The clinical stage of the disease at presentation is important for the outcome of the patients with Ca oesophagus. However, the outcome of treatment is poor in Tripura because majority of the patients report late, in whom only palliative care is possible.

Objective of Study

To study the patterns of involvement of Ca oesophagus.

MATERIALS AND METHODS

This study has been conducted in the Department of ENT in Tripura Medical College. Details of all the patients with Ca oesophagus who were admitted in the Department of ENT from June 2011 to May 2016 were collected. Data was retrieved from medical records department and analysed.

Inclusion Criteria

Patients with growth in the oesophagus and histopathologically confirmed cancer.

Exclusion Criteria

Histopathologically negative cases and unconfirmed cases.

RESULTS

During the period of study, a total of 87 cases of Ca oesophagus were registered. The age of patients at presentation ranged from 38 to 79 years. 22 (25.3%) patients were aged 50 years or below and 65 (74.7%) patients were above 50 years. Forty patients (45.9%) belonged to 51-60 age group. There were 62

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(71.3%) men and 25 (28.7%) women with a male to female ratio of 2.5:1. Majority of the patients (65.5%) belonged to rural areas and 72.4% patients were from low socioeconomic group.

All the patients presented with progressive dysphagia and weight loss (100%). 55 (63.2%), 30 (34.5%) and 21 (24.1%) patients presented with regurgitation, retrosternal pain and odynophagia respectively. Smoking and alcohol consumption were revealed by 60 (68.9%) and 55 (63.2%) patients respectively. Family history of oesophageal cancer was reported by 22 (25.3%) patients.

The middle third of the oesophagus was most frequently involved (59.8%), followed by lower third (27.6%) and upper third (12.6%). On oesophagoscopy examination, majority of the lesions were ulcerative (52.9%). HPE revealed squamous cell carcinoma in majority of the patients (88.5%). Adenocarcinoma occurred in 10 (11.5%) cases. Of all adenocarcinoma cases, 8 (80%) cases involved lower third and 2 (20%) cases involved middle third of oesophagus. TNM staging was done in 66 patients, out of which 81.4% patients were in advanced stage (Stages III and IV).

Variables	Number of Patients	%
Age (in years)		
≤ 50	22	25.3%
> 50	65	74.7%
Gender		
Male	62	71.3%
Female	25	28.7%
Area of Residence		
Urban	30	34.5%
Rural	57	65.5%
Socioeconomic Status		
Low	63	72.4%
High	24	27.6%
Smoking		
Yes	60	68.9%
No	27	31.1%
Alcohol Consumption		
Yes	55	63.2%
No	32	36.8%
Family History of Ca Oesophagus		
Yes	16	18.4%
No	71	81.6%

Table 1. Distribution of Patients According to their Features

Variables	Frequency	Percentage
Site		
Upper Third	11	12.6%
Middle Third	52	59.8%
Lower Third	24	27.6%
Gross Appearance		
Ulcerative	46	52.9%
Infiltrative	22	25.3%
Proliferative	19	21.8%
Histological Types		
SCC, Well Differentiated	21	24.1%

SCC, Mod. Differentiated	39	44.8%
SCC, Poorly Differentiated	17	19.5%
Adenocarcinoma	10	11.5%
Tumour Staging		
I, II	19	21.8%
III, IV	47	54.02%
Not Documented	21	24.1%

Table 2. Characteristic Features of Tumour

DISCUSSION

Oesophageal cancer is one of the most serious tumours, owing to its rapid development and fatal prognosis in most cases. Worldwide, oesophageal cancer ranks eighth in cancer incidence and sixth in cancer mortality. The incidence of oesophageal cancer varies widely, and certain areas such as northern China, north-eastern Iran and South Africa have very high rates of this disease with age standardised incidence rates from 50 to over 100 cases per 100,000 population per year.

In a study by Mabula D Mchembe et al in Tanzania, the peak age of incidence of oesophageal cancer in this study was found to be in the fourth decade of life, which is about a decade or two earlier compared to the findings in developed countries.⁵ In our study, the peak age of incidence was found to be in the sixth decade of life.

The male predominance demonstrated by Mabula D Mchembe et al⁵ in their study was in keeping with previous observation reported in a study performed elsewhere. However, equal gender distribution was reported in previous studies from Nigeria and Kenya.^{6,7} In our study, male: female ratio was 2.5:1. The male predominance in our study can be explained by the fact that most of known risk factors of oesophageal cancer are related to behaviour- smoking and excessive alcohol consumption- of which men are known to be worst consumers than their gender counterparts.

Globally, oesophageal cancer has been reported to be more prevalent in people with low socioeconomic status.⁸ This observation is reported in our study where 72.8% of patients were from low socioeconomic group. Socioeconomic class appears to be an independent risk factor in the development of oesophageal cancer. The vast majority of patients (65.5%) in the present study came from the rural areas. A similar observation was reported by others.

Several risk factors have been implicated in the geographic variation in the incidence of oesophageal cancer.^{9,10} Alcohol and tobacco abuse in the aetiology of oesophageal cancer is well established. In our study, history of alcohol consumption and smoking was documented in 63.2% and 68.9% of patients respectively. It has been estimated that more than 80% of oesophageal cancer cases in industrialised countries can be attributed to exposure to these lifestyle choices, either singly or jointly. Substantial alcohol intake, especially in combination with smoking, greatly increases the risk of squamous-cell carcinoma but not adenocarcinoma. The joint effect of alcohol and smoking when consumed together are potentiated and the final relative risk is multiplied.

Family history of oesophageal cancer has also been shown to be relevant in some high-risk areas. A study in Shanxi province, China, found that families who have a prior history of oesophageal cancer were significantly more likely to have reported as new case during 10 years of followup. In the present study, family history of oesophageal cancer was

reported in 18.4% cases, a figure significantly lower than the 43% reported by Dawsey et al.

The two most common symptoms present in all our patients were dysphagia and weight loss which is similar to previous studies from within and outside Africa. In this study, all patients presented at an advanced stage with progressive dysphagia and weight loss. Dysphagia and weight loss are so commonly associated that some authors regard them as being pathognomonic. Dysphagia is usually associated with bulky tumours that obstruct the oesophageal lumen, impairing its function and causing pain.

The location of the tumour within the length of the oesophagus varies with the histological type. Squamous cell carcinoma is commonly found in the middle and distal third of the oesophagus while adenocarcinoma is more commonly located in the distal third.

CONCLUSIONS

Oesophageal cancer is quite common in this part of India. The peak age of presentation is in the sixth decade of life and majority of patients present at advanced stage. Majority of the patients were from rural areas and belonged to low socioeconomic group. In our study, majority of the cases involved the middle third of oesophagus and most of the cases were squamous cell carcinomas. Poor accessibility to healthcare, lack of awareness, lack of screening programmes are reasons why majority of patients present in advanced stage.

REFERENCES

1. Jernal A, Murray T, Samuels A. Cancer statistics, 2003. *CA Cancer J Clin* 2003;53(1):5-26.
2. Parkin DM, Bray F, Ferlay J. Global Cancer statistics, 2002. *CA Cancer J Clin* 2005;55(2):74-108.
3. Schlansky B, Dimarino AJ, Loren D. A survey of oesophageal cancer: pathology, stage and clinical presentation. *Aliment Pharmacol Ther* 2006;23(5):587-93.
4. Adegboye VO, Obajimi MO, Ogunseyinde AO, et al. Transhiatal oesophagectomy as palliative treatment for carcinoma of the oesophagus. *East Afr Med J* 2002;79(6):311-6.
5. Mchembe MD, Rambau PF, Chalya PL, et al. Endoscopic and clinicopathological patterns of esophageal cancer in Tanzania: experiences from two tertiary health institutions. *World J Sug Oncol* 2013;11:257-63.
6. Pindiga HU, Akang EE, Thomas JO, et al. Carcinoma of the oesophagus in Ibadan. *East Afr Med* 1997;74(5):307-10.
7. Wakhisi J, Patel K, Buziba N, et al. Esophageal cancer in north rift valley of western Kenya. *Afr Health Sci* 2005;5(2):157-63.
8. Kollarova H, Machova L, Horakova D, et al. Epidemiology of esophageal cancer--an overview article. *Biomed Pap Fac Univ Palacky Olomouc Czech Repub* 2007;151(1):17-20.
9. Walker AR, Adam F, Walker J, et al. Cancer of the oesophagus in Africans in sub-Saharan Africa: any hopes for its control? *Eur J Cancer Prev* 2002;11(5):413-8.
10. Vizcaino AP, Parkin DM, Skinner ME. Risk factors associated with oesophageal cancer in Bulawayo, Zimbabwe. *Br J Cancer* 1995;72(3):769-73.