

OESOPHAGEAL CARCINOMA PROFILE- A RETROSPECTIVE STUDY

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ABSTRACT**BACKGROUND**

Oesophageal cancer is a serious malignancy with regards to mortality and prognosis. It is a growing health concern that is expected to increase in incidence over the next 10 years. Squamous cell carcinoma is the most common histological type of oesophageal cancer worldwide with a higher incidence in developing nations. With the increased prevalence of gastroesophageal reflux disease and obesity in developed nations, the incidence of oesophageal adenocarcinoma has dramatically increased in the past 40 years.

MATERIALS AND METHODS

Retrospective study was conducted to study the clinical profile of patients presented with oesophageal carcinoma at Government Medical College, Kottayam, Kerala, India, during January 1, 2015, to December 31, 2016. 104 subjects who met the inclusion criteria were enrolled. Data were collected from the records.

RESULTS

Out of 104 subjects enrolled in the study, 78 (75%) were males, rest 26 (25%) were females. 73% of the patients with oesophageal carcinoma were above 60 years. 79.8% patients presented with dysphagia. 87.5% cases had squamous cell type lesions. More than 75% of the lesions were in the mid and lower oesophagus. Noduloulcerative type was the most common morphologic presentation.

CONCLUSION

Squamous cell carcinoma is the most common oesophageal carcinoma in our institution. Majority of the lesions are located in the mid and lower oesophagus and are well differentiated.

KEYWORDS

Oesophageal Carcinoma, Kerala, Tertiary Care Centre.

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BACKGROUND

Oesophageal 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 Despite many advances in diagnosis and treatment, the 5-year survival rate for all patients diagnosed with oesophageal cancer ranges from 15% to 20%.² Even in developed countries, more than 85% of patients die within two years of diagnosis making it the sixth most common cause of cancer-related deaths in the world.³ In India, oesophageal cancer is the most common malignancy involving the gastrointestinal tract in Karnataka, Tamil Nadu, Kerala and Assam.⁴ Since the prognosis in oesophageal carcinoma is extremely poor and as there

seems to be little prospect for early detection or treatment, a better understanding of the aetiology/risk factors may suggest opportunity for its primary prevention.⁵

The epidemiology of oesophageal cancer in developed nations has dramatically changed over the past 40 years. Forty years ago, Squamous Cell Carcinoma (SCC) was responsible for greater than 90% of the cases of oesophageal carcinoma in the United States. Adenocarcinoma has now become the leading cause of oesophageal cancer in the United States representing 80% of cases.⁶ Various factors including tobacco consumption, unhealthy diet and diet deficient in trace elements, alkalinity of soil, genetic aberrations and socioeconomic status have been implicated in the aetiology of EC.^{7,8} SCC is predominantly seen in upper two-thirds of oesophagus unlike ADC, which is seen in lower one-third. The outcome of oesophageal carcinoma has been dismal even with the advent of modern surgical and radiotherapy techniques, targeted molecules and newer chemotherapeutic agents owing primarily to the late presentation of the disease. No recent population-based data is available regarding oesophageal carcinoma presentation profile in Kerala. In this study, we aim to study the clinical profile of patients

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presented with oesophageal carcinoma at Government Medical College, Kottayam, Kerala, this study has been undertaken for a better understanding of the clinical profile in patients with cancer oesophagus.

Aims and Objectives

To study the clinical profile of patients presented with oesophageal carcinoma at Government Medical College, Kottayam, Kerala, India, during January 1, 2015 to December 31, 2016.

MATERIALS AND METHODS

This retrospective study was conducted in the Department of Gastroenterology, Government Medical College, Kottayam. Patients with oesophageal carcinoma who attended from January 1, 2015, to December 31, 2016.

Inclusion Criteria- Patients with histological-proven oesophageal carcinoma are included in the study. Patients should have completed medical records also.

Exclusion Criteria- Patients in whom there is a possibility of involvement of oesophagus by local invasion are excluded. Those without histologic proof of oesophageal carcinoma are also excluded. Patients whose data is incomplete are also excluded.

A total of 104 patients who had histological documentation of oesophageal carcinoma were enrolled in the study. Data were then analysed for clinico-demographic information such as age, sex, residence, dietary habits, tobacco or alcohol consumption, presenting symptoms and signs and their correlation with disease parameters such as tumour location, histology and endoscopic morphology. Staging investigations included endoscopy, contrast-enhanced computed tomography scans including appropriate metastatic evaluation wherever indicated. Statistical analysis of data was done with SPSS software.

RESULTS

104 patients with oesophageal carcinoma studied during the study period. 78 males (75%) and 26 (25%) females.

Sex	Number of Patients (n)	Percentage
Male	78	75
Female	26	25

Table 1. Patient Characteristics - Sex

Majority of the patients with oesophageal carcinoma were above 60 years. Oesophageal carcinoma was rare below 40 years. 46 (44.23%) patients were in the 60-70 years age group.

Age (in Years)	Number of Patients (n)	Percentage
<40	7	6.73
40-60	21	20.19
60-70	46	44.23
>70	30	28.84

Table 2. Patient Characteristics Age

83 (79.8%) patients presented with dysphagia. Odynophagia was present only in 5 (4.8%) patients.

Presenting Symptom	Number of Patients (n)	Percentage
Dysphagia	83	79.80
Odynophagia	5	4.80
Vomiting/regurgitation	10	9.61

Table 3. Presenting Symptom

In endoscopic morphology, noduloulcerative variety predominated in 81 (77.8%) patients. 23 patients had pure proliferative morphology.

74 (71.15%) cases gave history of smoking on enquiry. 52 (50%) had history of betel chewing/gutka. But, alcohol use was found in 83 (79.8%) cases.

Sl. No.	Habit		No. of Cases	Percentage
1.	Smoking	Yes	74	71.15
		No	30	28.85
2.	Tobacco/betel Nut/gutka	Yes	52	50
		No	52	50
			Total	50
3.	Alcohol intake	Yes	83	79.8
		No	21	21.2

Table 4. Addictions

Endoscopic Appearance	No. of Patients (n)	Percentage
Noduloulcerative	81	77.88
Proliferative	23	22.12

Table 5. Endoscopic Appearance

Most common site of malignancy was in the lower oesophagus. 38 (38.53%) patients had lesions located at 30-35 cm from the incisor teeth.

Endoscopic Level, cm from Incisor Teeth	Number of Patients (n)	Percentage
<20	5	04.80
20-25	11	10.57
25-30	36	34.61
30-35	38	38.53
35-40	14	13.46

Table 6 Level of the Lesion

91 (87.5%) patients had squamous cell carcinoma in histology.

Histological Type	Number of Patients (n)	Percentage
Squamous cell	91	87.5
Adenocarcinoma	13	2.5

Table 7. Histological Type

72 (69.23%) patients had well-differentiated carcinoma. Only 6 (5.77%) individuals had poorly-differentiated histology.

Histological Grade	Number of Patients (n)	Percentage
Well differentiated	72	69.23
Moderately differentiated	26	25.00
Poorly differentiated	6	5.77

Table 8. Histological Grade

35 (33.65%) patients had multiple liver metastatic lesions. 12 (11.5%) patients had lung lesions. 4 (3.84%) patients had bony metastasis. Only one patient had brain metastasis who presented with seizures.

Site of Metastasis	Number of Patients (n)	Percentage
Liver	35	33.65
Lungs	12	11.5
Bone	4	3.84
Brain	1	0.96

Table 9. Site of Distant Metastasis

DISCUSSION

The incidence of EC is rapidly increasing worldwide. Nearly, two third of ECs in the United States are ADCs, whereas in Asian nations squamous cell cancer continues to be the major histological type.⁹ Oesophageal cancer is predominantly a disease of the elderly, where nearly one third of the diagnosed patients are more than 75 years of age.¹⁰ The lifetime risk of EC is reported to be 0.8 for males and 0.3 for females and mean age of diagnosis is 67 years.¹¹ Majority of patients belongs to remote areas. Patients from this area are habitat of smoking, chewing tobacco and generally used to ingest alcohol on regular basis. Smoking is a general causative factor for abnormal cell growth. 74 (71.15%) cases gave history of smoking on enquiry. 52 (50%) had history of betel chewing/gutka. But, alcohol use was found in 83 (79.8%) cases. Epidemiological studies confined that environmental factors and lifestyle played an important role in prevalence of cancer and more than 90% of cases were caused due to lifestyle and regular diet. General habits like tobacco, alcohol consumption and dietary habits were found to be major risk factor. Indians have been known to smoke, chew and snuff tobacco from long decades ago.¹² The present study reveals that peoples specially belonging to remote areas are not cautious.

The majority of the patients in our study were above 60 years age in both the sexes with males outnumbering females in all age groups. Dysphagia is one of the earliest and predominant presenting symptoms of oesophageal carcinoma. Nearly, 80% of the patients in our study has dysphagia as the most common presenting symptom though patients with tumour located <20 cm presented predominantly with odynophagia. Squamous cell carcinoma still is the predominant histological subtype in Asian nations where most of the cases occur in middle or lower third.¹³ The recent increase in oesophageal adenocarcinoma was attributed to increase in erosive reflux diseases. Nearly, 85% of the lesions in our study occurred in the mid and lower oesophagus with noduloulcerative morphology. In a study conducted on nearly 400 EC patients in Japan, two most frequent morphological types were "ulcerative localised" and

"ulcerated infiltrative" type (JSED types 2 and 3).¹⁴ Histological grade is known to affect lymph node metastasis. In a study by Bollschweiler et al,¹⁵ it was reported that G1/G2 histology was associated with a lower rate of lymph node metastasis compared with G3 in oesophageal carcinoma. In our study, 72 (69.23%) patients had well-differentiated oesophageal carcinoma, 26 (25%) patients had moderately-differentiated oesophageal lesions. Liver is the most common site of distant metastasis found in 35 (33.6%) patients.

CONCLUSION

Oesophageal carcinoma predominantly occurs in males above 60 years of age. Smoking of cigarettes and beedis, chewing of betel and gutka, alcohol intake, which are well-established risk factors for oesophageal carcinoma are found in significant proportion of our patients. But, these are modifiable risk factors. So, our community-based programmers to create public awareness about these risk factors has to be strengthened.

Most common presenting symptom is dysphagia and most common site is mid and lower oesophagus. Squamous cell carcinoma still dominates in our institution. In our study, majority of the lesions are either well differentiated or moderately differentiated. Liver is the most common site of metastasis.

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