

A Retrospective Study of Carcinoma Esophagus in Western Rajasthan

Rameshwar Lal¹, Indra Singh Choudhary², Suresh Rulaniya³

^{1,2}Department of General Surgery, SN Medical College Jodhpur, Rajasthan

³SCB medical college & Hospital Cuttack, Odisha

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Corresponding author: Dr. Suresh Rulaniya

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Abstract:

Background: Esophageal cancer is a deadly malignancy with a very low survival. Esophageal cancer is the 6th most common cancer and cause of cancer-related deaths in India.

Objectives: To evaluate the incidence, clinical profile and varies treatment modality in esophageal cancer in the western Rajasthan population.

Materials and Methods: This retrospective analytic study was conducted in Department of General Surgery at M. G. Hospital attached to Dr S. N. Medical College, Jodhpur. A total of 32 patients with Esophageal Cancer were registered in the 8 year duration. The socio-demographic parameters including age, gender, locality, socioeconomic status, religion, education, occupation, and the addiction patterns of the patients were studied. All the patients were treated with the standard protocol.

Results: Out of 35 patients, 43.75 % were males and 56.25 % female. Male: female ratio in study was (0.77:1). The age were range from 21-73 years, the incidence was highest in 5th decade followed by 6th and 7th decade in the study patients. The most common symptom was dysphagia. In management Surgical resection (35.48%), Surgical resection + chemo / RT or both (16.12%), palliative resection and chemoradiotherapy (3.22%) , Feeding jejunostomy ± chemo / RT or both (25.90%) was done. longest survival period was 18 month as reported in our study.

Conclusion: Esophageal carcinoma is important cancers prevalent in western Rajasthan, with peak incidence was in 5th decade of life. Multimodality treatment is advocate in young patients with advanced disease. Surgical resection was the mainstay of treatment in absence of systemic metastasis. Terminally ill patients were treated by palliative measures like feeding jejunostomy / stenting.

Keyword: Esophageal Cancer, Incidence, Western Rajasthan

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Introduction

Esophageal cancer is the eighth most common cancer in the world. There has been a significant increase in the incidence of esophageal cancer world over, particularly adenocarcinoma. Countries with a low HDI

like India have a high incidence of esophageal cancer with higher proportion of squamous cancers[1]. India has an age standardized incidence rate (ASR) of 6.5 per 100,000 population for males and 4.2 per 100,000

populations for females. This translates into approximately 47,000 new cases each year and 42,000 deaths[2]. A very high incidence of esophageal cancers has been reported in North-East region of India. This is a part of an esophageal “cancer belt,” which extends from northeast China to the Middle East, where incidence rates of SCC of the esophagus have been reported as high as 100 cases per 100000 annually[3].

The standard treatment of operable esophageal cancer in the absence of medical contraindications is surgery. Radiation, chemo-radiation for definitive treatment and combination of radiation and chemotherapy with surgery are other treatment options. However, the overall survival continues to remain far from satisfactory. The reported five year survival ranges from 5% to 30 percentage[4].

Materials and Methods

This retrospective analytic study was conducted in Department of General Surgery at M. G. Hospital attached to Dr S. N. Medical College, Jodhpur. A total of 32 patients with Esophageal Cancer were

registered in the 8 year duration. The socio-demographic parameters including age, gender, locality, socioeconomic status, religion, education, occupation, and the addiction patterns of the patients were studied. All the patients were treated with the standard departmental protocol. The site of the disease and the histology were also recorded.

Data were collected from a hospital records section. Follow up records as the computerized data, hard copies of the files, and also the radiotherapy files of the patients were reviewed.

All the data was recorded in a Performa and Statistical analysis was done using Statistical Package for Social Sciences (SPSS) for windows version 20.0 (IBM Corp., Armonk, USA).

Results

A total of 32 patients with Esophageal Cancer were included in this study in the 8 year duration.

Table 1: Incidence of carcinoma esophagus in various age groups

S. No.	Age in years	No of cases	Percentage
1.	21- 30	1	3.125
2.	31-40	4	12.5
3.	41-50	13	40.62
4.	51-60	6	18.75
5.	61-70	5	15.625
6.	71-80	3	9.375

The incidence was highest in 5th decade followed by 6th and 7th decade in the study patients. 43.75 % case of carcinoma esophagus found in male and 56.25 % in female. Male: female ratio in study was (0.77:1).

Table 2: various clinical symptoms found in the patients of carcinoma esophagus

S. No.	Symptoms	No of cases	Percentage
1.	Dysphagia	32	100
2.	Wt. loss	29	90.62
3.	Regurgitation	13	40.62
4.	Vomiting	6	18.75
5.	Cough	12	37.50
6.	Dyspnea	3	9.375
7.	Loss of appetite	9	28.12
8.	Hoarseness of voice	2	6.25

The most common symptom was dysphagia (100 %), wt loss was present in 92.62 % patients. Cough, dyspnea, and hoarseness of voice were less common symptoms.

Table 3: Type of growth seen on esophagoscopy

S. No.	Type of growth	No. of cases	Percentage
1.	Proliferative	20	62.5
2.	Infiltrative	5	15.62
3.	Ulcerative	7	21.87

On endoscopic examination the commonest type of growth was proliferative type (62.5%), followed by ulcerative (21.87%) and infiltrative (15.62%).

Table 4: Distribution of management of esophageal malignancies

S. No.	Type of management	No. of cases	Percentage
1.	Surgical resection alone (esophagectomy)	11	35.48
2.	Surgical resection + chemo / RT or both	5	16.12
3.	Radiotherapy alone	1	3.22
4.	Chemotherapy alone	0	0
5.	Chemoradiation	1	3.22
6.	Dilatation	1	3.22
7.	Stenting \pm RT \pm FJ / FG	4	12.90
8.	Feeding jejunostomy \pm chemo / RT or both	8*	25.80

(Total 32 patients admitted, one LAMA and 31 managed)

In our study 35.48% patients with early and respectable lesion were treated with surgical resection only.

Patients who had advanced disease and poor nutritional status underwent palliation of dysphagia and feeding jejunostomy / gastrostomy for nutritional purpose. (* Out of 8 patients, three were planned for THE, but

on table they were found inoperable and undergone FJ). 16.12% patients with locally advanced but operable lesion were managed with palliative resection and chemoradiotherapy.

Locally advanced and unresectable young patients dealt with multimodality treatment. Stenting was done in 4 patients.

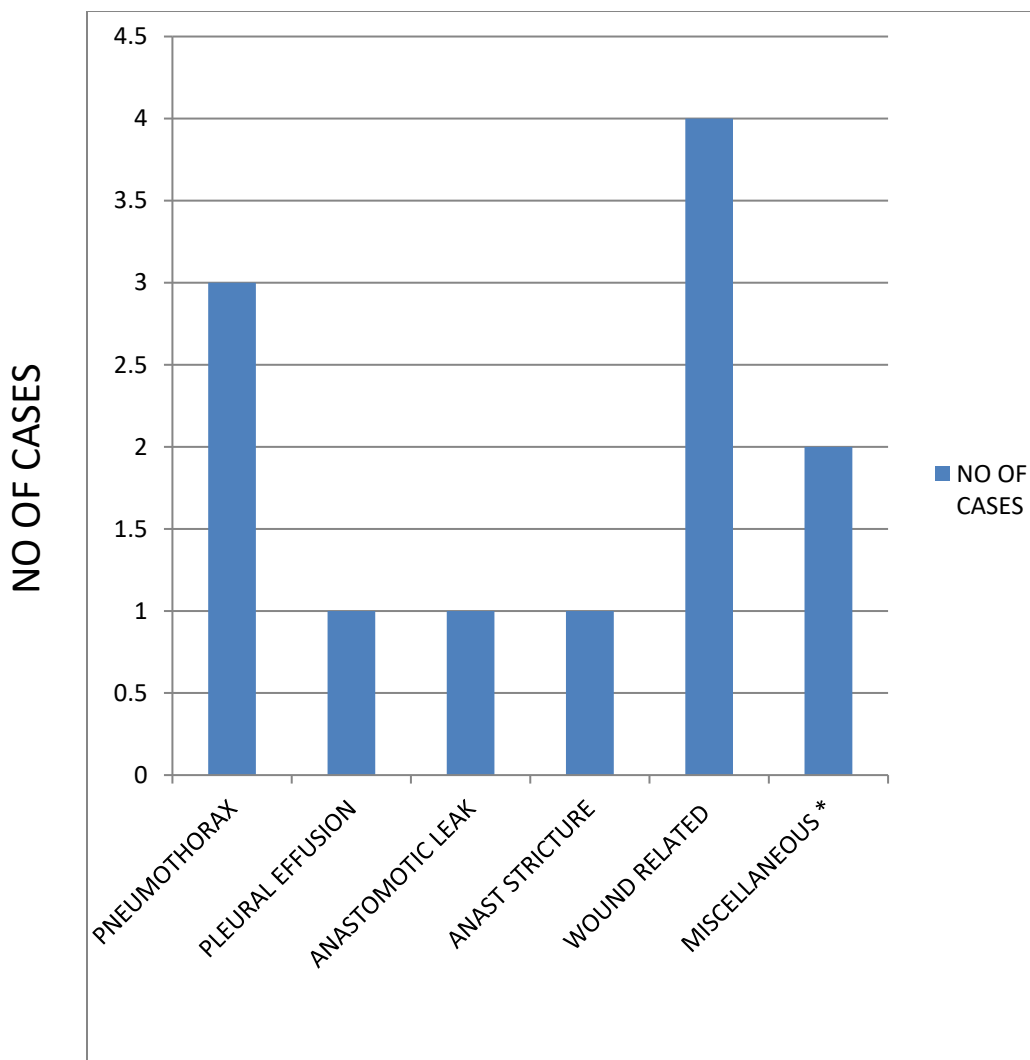


Figure 1: Complications

Table 5: Follow up of the patients with carcinoma esophagus

Duration of follow up	No of patients observed	Alive		Expired
		Disease free asymptomatic /	Secondary Recurrence /	
3 months	17	13	1	3
6 months	10	7	3	0
9 months	7	2	3	2
12 months	6	1	2	3
18 months	1	0	0	1
24 months	-	-	-	-
30 months	-	-	-	-
36 months	-	-	-	-

Follow up study varies from 3 months to 3 years. Out of 32 patients, one expired in post

operative period and one patient left against medical advice, were not included in follow up study.

17 cases / their records (56.66%) were available for follow up. Within 3 months of discharge, 3 patients (17.64%) expired and 13 patients (76.47%) were asymptomatic. 76.47% patients remained asymptomatic for 3 months. 70% patients remained asymptomatic for 6 months. 28.5 patients remained asymptomatic for 9 months 16.6% patients remained asymptomatic for 12 months longest survival period was 18 month as reported to us.

Discussion:

In the present study the age of the patients ranged from 21 years to 80 years. Majority of patients presented in 5th decade of life. The youngest one was 25 years old female with squamous cell carcinoma of lower 1/3 of esophagus, while the oldest was 75 years female, who had squamous cell carcinoma of lower 1/3 of esophagus. A gradual rise in incidence of esophageal cancer in middle aged to peak in 5th decade was seen.

The incidence of esophageal adenocarcinoma increases with age, with a median age at diagnosis of 55 to 60 years and a striking male preponderance (7:1)[5,6]. Portale et al. reported an increasing number of young patients with esophageal adenocarcinoma during the past decade[7].

Squamous cell cancer of the esophagus also has a male preponderance, with rates two to four times higher in males than females[5,6]. In contrast to adenocarcinoma, squamous cell cancer incidence rates were highest in blacks and Asians, and they were stable or declined for all ethnicities between 1992 and 1998, which could be influenced by different socioeconomic variables existing between these ethnic groups[8]. In the present study it was similar to those reported above, peak incidence being in 5th decade of life.

In our study the most common symptom was dysphagia (100 %), weight loss was present in 92.62 % patients. Cough, dyspnea, and hoarseness of voice were fewer common symptoms. Studies are suggestive of that the most common symptom in patients with this malignant tumor is dysphagia (74%). It also indicates extensive involvement of the esophagus and surrounding structures by cancer at least in 90 % of cases. In addition, 57% of patients complain of weight loss and 17% of odynophagia at the time of diagnosis[9].

Steve Gold Schmid (1994) describes tracheo-esophageal fistula as a late complication of tumor involving the tracheobronchial tree with tumor necrosis creating fistula[10]. In the study maximum patients (56.25%) reported within 3-6 months duration of dysphagia. 87.5 % of total patients attended hospital before 6 months.

In study group endoscopic examination was done in all patients. The commonest type of growth seen was proliferative type (62.5%), followed by ulcerative (21.87%) and infiltrative (15.62%).

In our study 35.48% patients with early and resectable lesion were treated with surgical resection only. Patients who had advanced disease and poor nutritional status undergone palliation of dysphagia and feeding jejunostomy / gastrostomy for nutritional purpose. (*Out of 8 patients, three were planned for THE, but on table they were found inoperable and undergone FJ) 16.12% patients with locally advanced but operable lesion were managed with palliative resection and chemoradiotherapy. Locally advanced and unresectable young patients dealt with multimodality treatment. Stenting was done in 4 patients. Surgery offers the highest likelihood of cure for patients with localized disease, and it can offer quality palliation for patients with more advanced disease[11,12].

The development of self expanding metal stents (SEMS) offered the rapid, easy

placement with reduced procedure time, reduction in morbidity and mortality and decreased hospital stay, thus making them highly cost effective[14].

Trials of neoadjuvant radiotherapy have failed to show increased resection rate or improved survival compared with surgery alone[15,16]. Post operative RT was studied in three randomized trials,[17,18] and all three demonstrated improved local disease control with no difference in 5 year survival. In patients with node positive disease, there was borderline positive survival benefit. The chance of mediastinal, cervical lymph node, and anastomotic recurrences was also reduced[19].

In 2001, Urba et al reported that preoperative chemoradiation may improve locoregional control, there was no effect on distant metastasis and overall survival[20]. Rice et al reported that postoperative chemo-radiotherapy remains a treatment option for patients who are at high risk for locoregional recurrence, and it may have benefit in a selected subgroup of patients[21].

In the present study, the most common complication was wound related (25 %) followed by pneumothorax (18.75%). Anastomotic leak occurred in 6.25 % cases. One patient developed intraabdominal biliary collection and improved after USG guided aspiration and drainage. It was probably secondary to leakage from pyloroplasty site. Portale G et al summarized the complications occurring in 263 consecutive resections for esophageal cancer[22].

Follow up study varies from 3 months to 3 years. Out of 32 patients, one patient expired in post operative period and one patient left against medical advice, were not included in follow up study. 17 cases / their records (56.66%) were available for follow up. Within 3 months of discharge, 3 patients (17.64%) expired and 13 patients (76.47%) were asymptomatic. 76.47% patients remained asymptomatic for 3 months.70%

patients remained asymptomatic for 6 months.28.5 patients remained asymptomatic for 9 months. 16.6%patients remained asymptomatic for 12 months. Longest survival period was 18 month as reported to us.

Conclusions:

Esophageal carcinoma is important cancers prevalent in western Rajasthan, with peak incidence was in 5th decade of life. Multimodality treatment is advocate in young patients with advanced disease. Surgical resection was the mainstay of treatment in absence of systemic metastasis. Terminally ill patients were treated by palliative measures like feeding jejunostomy / stenting.

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