



## Palliative care and life expectancy in advanced carcinoma esophagus: A prospective study in a tertiary care hospital.

Dr. Pratik Savant, Dr. Dattaprasad Samant, Dr. F.P. Noronha  
*Department of General Surgery, Goa Medical College and Hospital, Bambolim, Goa*

Submitted: 15-07-2022

Accepted: 30-07-2022

**ABSTRACT: Background:** Carcinoma esophagus is traditionally known for its late presentation, often in an inoperable stage, thus carrying considerable morbidity and mortality. There has been a paradigm shift in the multimodality palliative approach to alleviate the quality of life in these patients. Aim of this study was to review the literature into various palliative options available and to assess 1 year survival rate from the time of presentation in Advanced Carcinoma esophagus.

**Methods:** Prospective observational study comprising of 40 cases of advanced carcinoma esophagus from October 2016 to September 2018 in Goa Medical College. All the cases were examined and investigated including endoscopic biopsy and CT scan. Mean and chi square test analysis was performed.

**Results:** Most of the patients presented in advanced stage of the disease in which curative resection was not an option. 35% of the patients received radiotherapy and esophageal dilatation and stenting, 30% received chemotherapy, 22.5% received palliative radiotherapy alone of which 2 patients showed complete endoscopic resolution. 8 patients expired within 1 year of presentation thus contributing to 1 year survival rate of 80%.

**Conclusion:** Majority of the patients often present with advanced disease necessitating the need for a multidisciplinary approach towards palliation in alleviating the quality of life in them. Various modalities available include pain relief, chemoradiation either in combination or alone, endoscopic dilatation and stenting. Despite all these advances, the overall prognosis is not very encouraging.

### I. INTRODUCTION

Accounting for 47000 new cases every year, carcinoma esophagus constitutes 7% of all gastrointestinal tumours and is the 8<sup>th</sup> most common cancer worldwide<sup>1</sup>. Multifactorial in etiology, Carcinoma esophagus shows large geographic differences with squamous cell carcinoma and adenocarcinoma being the predominant histological variants. Diagnosis is

mainly by endoscopic biopsy and subsequent staging with CT scan. Although surgery is the mainstay of curative treatment, most patients present with advanced stage of the disease thus carrying poor prognosis and meagre life expectancy. This mandates the need for a multidimensional palliative approach to alleviate the quality of life in these patients. Various options include pain relief, chemo radiation either in combination or alone, endoscopic dilatation and stenting besides counselling and emotional support. Despite many advances in diagnosis and treatment, the 5 year survival rate for all patients diagnosed with esophageal cancer ranges from 15% to 20%<sup>3</sup>.

### II. MATERIALS AND METHODS

Prospective observational study conducted on 40 patients from October 2016 to September 2018 in the Department of Surgery, Goa Medical College and Hospital which is a tertiary care hospital for the state of Goa and referral centre for neighbouring districts of Sindhudurg (Maharashtra) and Karwar (Karnataka). The study also includes retrospective cases of carcinoma esophagus that are on regular follow up in GMC.

The study included all the patients of advanced carcinoma esophagus (Stage 3b and higher), diagnosed and following up in Goa Medical College. After detailed history, including assessment of risk factors and examination, all patients underwent routine investigations like complete hemogram, renal and liver function tests, Chest x-ray and subsequent CECT thorax and abdomen. All patients underwent endoscopic biopsy for histopathology confirmation along with CT Scan for TNM staging of the disease. The patients received Chemoradiation either in conjunction or radiation alone, whereas those with absolute dysphagia underwent palliative esophageal dilatation and stenting.

The patients were followed up at intervals of 3, 6 months and 1 year after the time of first presentation. A note was made in case the patient expired before 1 year. The Data was collected from case records and collected data tabulated in MS



Excel and expressed as mean for continuous data and percentages for categorical variables. Chi square test was applied wherever necessary for statistical significance.

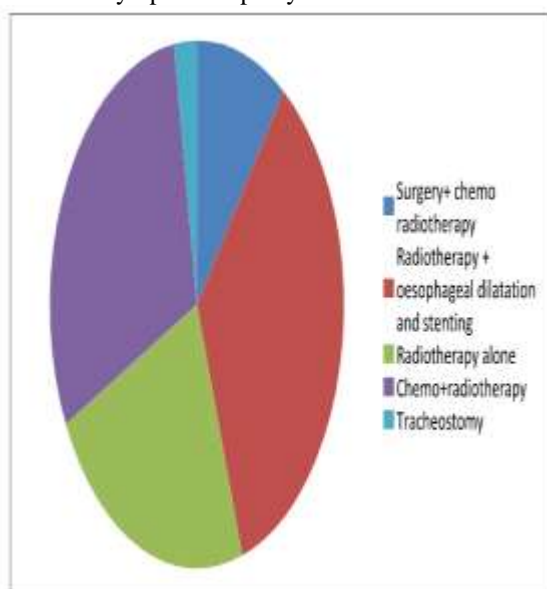
### III. RESULTS

During the period of October 2016 to September 2018, a total of 16,408 patients were admitted in surgical wards, of which 217 were malignancies related to the gastrointestinal system. 40 patients were diagnosed as cases of carcinoma Oesophagus, thus making the incidence around 0.2%.

It was found that cases of esophageal cancer occurred in maximum frequency in the age group 50-59. It was also noticed that almost 75% of all oesophageal cancers occur in the age group of 50 to 70 years. The youngest patient in the study was 31 years and the eldest was 81years of age. Males were marginally more affected than females (1.4:1).

In the present study, the most common site of oesophageal cancer was in the middle third of the esophagus accounting for almost 55%. Lower third growths constituted about 32.5%. The least common site is upper third of the oesophagus (12.5% )

Dysphagia was the presenting symptom in all the 40 patients studied. The associated symptoms included heartburn. 20% of the patients presented with cachexia with advanced disease. 6 patients in the study presented with aspiration pneumonia while 1 patient presented with metastatic lymphadenopathy.



Most of the patients took more than 2 weeks to take medical advice after the appearance of first symptom. However majority (70%) presented within 3 months of symptoms. Only 7.5 % presented within 2 weeks of onset of symptoms.

The most prevalent histological type was squamous cell carcinoma accounting for 80%. The other common histological type was adenocarcinoma. Of the 40 patients studied, 29 revealed history of chronic smoking which accounts for 72.5%, thus reinforcing it as the single most risk factor in the causation of the disease.

Most of the patients presented with advanced disease in which curative resections were not an option. 35% of the patients received radiotherapy and oesophageal dilation and stenting, while 30% of patients received chemoradiotherapy.

22.5% of the patients received radiotherapy alone of which 2 patients showed complete endoscopic resolution after radiotherapy.

One patient curiously presented in emergency with respiratory distress with thyroid secondaries and had to undergo emergency tracheostomy with isthmectomy with oesophageal biopsy. Histopathological examination from the thyroid isthmus showed secondaries from squamous cell carcinoma of the oesophagus.

Most of the patients presented at an advanced stage with cachexia and other disease related complications. This contributes to poor survival in patients of carcinoma oesophagus. In the current study, 8 patients expired within 1 year of presentation thus contributing to 1 year survival rate of 80%.

### IV. DISCUSSION

Carcinoma Oesophagus is one of the least studied and deadliest cancer worldwide because of its extremely aggressive nature and poor survival rate. Age standard incidence and histopathology of carcinoma oesophagus varies in different countries with a variety of etiological factors implicated in its causation.

A variety of dietary and environmental factors are implicated in the causation. The important ones include smoking, chronic alcohol consumption, exposure to nitrosamines, Chronic Reflux and Barrettes Oesophagus. Of the 40 patients studied, 29 revealed history of chronic smoking which accounts for 72.5%, thus reinforcing it as the single most risk factor in the causation of the disease.

Radical esophagectomy remains the mainstay of treatment in operable cases with curative intent. However, most of the patients presented to us with dysphagia in advanced stage which mandated the need for a multimodality



approach towards palliative care to alleviate their quality of life.

The palliative options available to us are radiotherapy, dilatation and esophageal stenting, chemoradiotherapy, either in conjunction or alone. In the present study, 35% of the patients received radiotherapy and oesophageal dilation and stenting, while 30% of patients received chemoradiotherapy. 22.5% of the patients received radiotherapy alone of which 2 patients showed complete endoscopic resolution after radiotherapy.

Most of the patients present at an advanced stage with cachexia and other disease related complications. This contributes to poor survival in patients of carcinoma oesophagus. In the current study, 8 patients expired within 1 year of presentation thus contributing to 1 year survival rate of 80%.

## V. CONCLUSION

Carcinoma esophagus is traditionally known for its late presentation, often in an inoperable stage, thus carrying considerable morbidity and mortality. Majority of the patients often present with advanced disease necessitating the need for a multidisciplinary approach towards palliation in alleviating the quality of life in them. Various modalities available include pain relief, chemoradiation either in combination or alone, endoscopic dilatation and stenting. Despite all these advances, the overall prognosis is not very encouraging leading to poor survival. This mandates a need for aggressive research and screening for early diagnosis and radical treatment in carcinoma esophagus.

## BIBLIOGRAPHY

- [1]. Herszenye L, Tulassay Z. Epidemiology of gastrointestinal and stromal tumors, *Eur Rev Med Pharmacol Sci.* 2010;14: 249-258
- [2]. Young JL, Percy CL, Asire AJ, Berg JW, Cusano MM, Gloeckler LA, HOrn JW, Lourie WI, Pollack ES, Shambaugh EM. Cancer incidence and mortality in the United States, 1973-77. *Natl Cancer Inst Monogr.* 1981; (57): 1-87
- [3]. Pennathur A, Gibson MK, Jobe BA, Luketich JD. Oesophageal carcinoma. *Lancet* 2013; 381:400-412.
- [4]. Torek F. the first successful case of resection of the thoracic portion of the oesophagus for carcinoma. *Surg Gynecol Obstet.* 1913;16:614
- [5]. Schwartz's Principles of surgery 10e: Esophagus and diaphragmatic hernia: B.A. Jobe, John G. Hunter, David Watson.
- [6]. International Agency for research on cancer, volumes 1 to 105. List of Classifications by Cancer sites with sufficient or limited evidence in Humans July, 2014.
- [7]. Prabhu A, Obi KO, Rubenstein JH. The synergistic effects of alcohol and tobacco consumption on the risk of esophageal squamous cell carcinoma: A meta-analysis. *Am J Gastroenterol.* 2014;109:822-7.
- [8]. Lu SH, Chui SX, Yang WX, Hu XN, Guo LP, Li FM. Relevance of n-nitrosamines to oesophageal cancer in China. *IARC Sci Publ.* 1991; 11-7.
- [9]. Song YM, Li L, Ou YW, Gao ZB, Li EM, Li XC, et al. Identification of genomic alterations in oesophageal squamous cell cancers. *Nature.* 2014;509:91-5
- [10]. Poon RT, Law SY, Chu KM, Branicky FJ, Wong J. Multiple primary cancers in oesophageal squamous cell carcinoma: Incidence and implications. *Ann thorac surg.* 1998;65(6):1529-1534
- [11]. Shaheen N, Ransohoff DF: Gastroesophageal reflux, Barrett esophagus, and esophageal cancer: scientific review. *JAMA.* 2002;287(15);1972-1981
- [12]. Shimizu M, Nagata K, Yamaguchi H, et al. Squamous intraepithelial neoplasia of the esophagus: past, present and future. *J Gastroenterol* 2009;44:103-12
- [13]. Sampliner RE. Practice guidelines on the diagnosis, surveillance, and therapy of Barrett's esophagus. The practice parameters committee of the American College of Gastroenterology. *Am J Gastroenterol* 1998;93;1028-32
- [14]. Enzinger PC, Mayer RJ. Esophageal cancer. *N Engl J Med.* 2003;349;2241-2252
- [15]. El-Serag HB. The epidemic of esophageal adenocarcinoma. *Gastroenterol Clin North Am.* 2002;31:421-40
- [16]. Vizcaino AP, Moreno V, Lambert R, et al. Time trends incidence of both major histological types of Esophageal carcinomas in selected countries, 1973-1995. *Int J Cancer.* 2002;99:860-868
- [17]. Chandanos E, Lagergren J. The mystery of male dominance in oesophageal cancer and the potential protective role of oestrogen. *Eur J Cancer.* 2009;45:3149-55
- [18]. Nordenstedt H, El-Serag H. The influence of age, sex, and race on the incidence of esophageal cancer in the United States (1992-2006) *Scand J Gastroenterol.* 2011;46:597-602.