

FREQUENCY OF ESOPHAGEAL CARCINOMA IN PATIENTS PRESENTING WITH DYSPHAGIA

Muhammad Shoaib Khan, Iltaf, Adnan ur rehman, Khalid hameed, Said Amin

ABSTRACT

Objective of the Study: To determine the frequency of esophageal carcinoma in patients presenting with dysphagia.

Patient and Methods: This descriptive study was conducted in the Gastroenterology and Hepatology Department of Hayatabad medical complex Peshawar from October 2012 to July 2013. Patients with history of dysphagia were included in the study after applying the exclusion criteria. Detailed history taking, systemic examination and base line investigations were done for all patients followed by endoscopic examination of the upper GI tract along with biopsy from suspicious lesions. All this information was entered into a specially designed proforma. All data was analyzed using SPSS Program 10.0. Descriptive statistics were calculated for the study variables.

Results: A total of 100 patients with dysphagia were included in this study out of which 63 (63 %) were male and 37 (37 %) were female with male to female ratio of 1.7:1. Patients were in the age range of 30-70 years with most of the patients between 50-60 years of age. Mean age was 50 years with a SD of ± 7.9 years. Out of 100 patients 54 had esophageal carcinoma and the most common site of involvement by carcinoma esophagus was middle third followed by lower third.

Conclusion: Dysphagia is an alarm feature requiring immediate evaluation and management according to the cause. The patient's main concern is presence or absence of malignancy too. Elderly patients with dysphagia and weight loss and patients from areas having high incidence of malignancy should be evaluated for esophageal malignancy, particularly Afghan patients.

Key Words: Dysphagia, carcinoma esophagus.

INTRODUCTION

Malignancies of the upper gastrointestinal (GI) tract are highly lethal malignancies¹. The five-year survival rate for esophageal cancer is among the worst reported for any malignancy. According to data the five-year survival for patients with esophageal cancer has improved only modestly over the last 50 years, from 4 percent in the years 1950 to 1954, to 17 percent during the period 1996 to 2003². The propensity of upper GI malignancies for early metastatic dissemination is well known; even patients with the earliest stage disease are at risk^{3,5}. Esophageal cancer has undergone a major epidemiologic evolution over the last 20 years, with a declining incidence of squamous cell cancer (SCC) and a dramatic rise in the incidence of adenocarcinoma. These patients usually present with symptoms of esophageal dysphagia along with weight loss. In patients with dysphagia the major concern is also malignancy especially elderly patients and patients from area having high incidence of esophageal malignancy specially the Afghan population.

Contact:

Dr Muhammad Shoaib Khan

TMO, Gastroenterology and Hepatology Unit, HMC.

Phone: 03339249019

E-mail: hotwire_14@hotmail.com

Address: Department of Gastroenterology and Hepatology, HMC, Peshawar

OBJECTIVE

To determine the frequency of esophageal carcinoma in patients with dysphagia.

PATIENTS AND METHODS

This study was conducted in the Gastroenterology and Hepatology Department of Hayatabad medical complex Peshawar, from October 2012 to July 2013. The study was approved by the research and ethics committee of the hospital. Written informed consent was obtained from all the patients.

All adult patients from 30-70 years of age of either sex who complained of dysphagia were included in the study on the basis of non-probability convenience sampling after careful history, examination and required investigations along with upper GI endoscopy and biopsy from suspicious lesions.

Patients who had cardiovascular accidents, Parkinson's disease, Multiple sclerosis, systemic sclerosis, Brain stem tumor, Mediastinal tumors, vascular compression or cervical osteophytes etc were excluded from the study.

Patients were interviewed and data regarding demographic profile, history of dysphagia, presence of associated medical illnesses and medications used were collected.

Data was recorded in a specially designed proforma. All data was analyzed using statistical package

SPSS 10.0. Descriptive statistics were used. Mean and standard deviation was calculated for age. Frequencies and percentages for variables were calculated.

RESULTS

A total of 100 patients were enrolled into the study on the basis of inclusion and exclusion criteria. Out of them 63 (63 %) were male and 37 (37 %) were female with a male to female ratio of 1.7:1.

Age range was from 30 to 70 years with a mean age \pm SD of 50 ± 7.9 years. Most of the patients were in the age range of 50 to 60 years as shown in Table 1.

Table 1: Age wise distribution of patients

Age Range	Number of Patients	Percentage
30 - 40 years	14	14 %
41 – 50 years	28	28 %
51 – 60 years	48	48 %
61 – 70 years	10	10 %
TOTAL	100	100 %

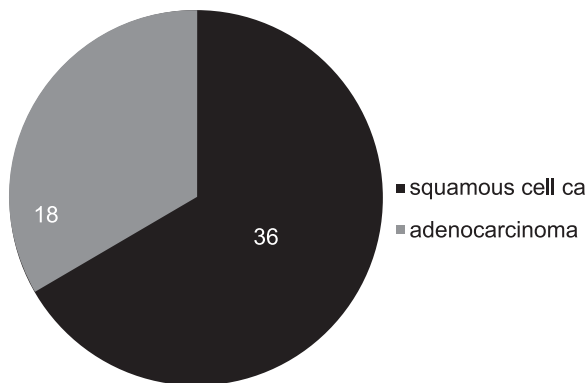


Figure 1: number of patients with squamous cell carcinoma and adenocarcinoma n=total number of patients having esophageal carcinoma =54

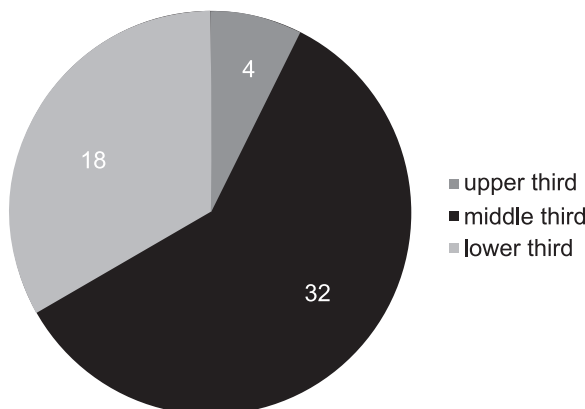


Figure 2: site of involvement by esophageal carcinoma n = total number of patients having esophageal carcinoma = 54

Out of 100 patients 54 patients (54 %) were found to have esophageal carcinoma. Out of these patients 36 patients were found to have squamous cell carcinoma and 18 patients were having adenocarcinoma, as shown in Figure 1, on the basis of histological reports.

Most common site of involvement was middle third of the esophagus followed by lower third as shown in Figure 2.

DISCUSSION

The word dysphagia is derived from the Greek words “dys” (with difficulty) and “phagia” (to eat). Dysphagia is a subjective sensation that suggests the presence of an abnormality in the passage of liquids or solids from the oral cavity to the stomach. Patient’s complaints range from the inability to initiate a swallow to the sensation of solids or liquids being hindered or stuck during their passage through the esophagus into the stomach. Dysphagia is considered to be an alarm symptom, indicating the need for an immediate evaluation to define the exact cause and initiate appropriate therapy⁶. Dysphagia may be either oropharyngeal dysphagia in which case there is a problem in transferring the food bolus from the oropharynx to the upper esophagus or esophageal dysphagia in which case there is impaired transport of the bolus through the body of the esophagus. It is the esophageal dysphagia which brings the patients to gastroenterology department. It may be caused by mechanical obstruction when it is called mechanical dysphagia or due to motility disorders, when it is called motor dysphagia⁷.

Malignancy is one of the most common causes of dysphagia and it is the prime concern of the patient when they present with this symptom. Esophageal carcinoma is the sixth most common cancer in men in local population, while it is the leading cancer in Afghans. It is similar to those observed in another study from Pakistan conducted by Jan S and colleague⁸.

Carcinoma esophagus is usually the disease of old age, however, it has been observed in young age group as well as observed by Afridi SP and colleagues⁹. In our study it was most commonly seen in the age group of 50-60 years. The results of other series from Pakistan show similar frequency of age distribution with a mean of $59 + 13$ years in males and $50 + 13$ years in females. In our study male to female ratio was 1.7:1 while in other local study by Salih M et al. the male to female ratio was 1.4:1.10.

Out of 54 cases of carcinoma esophagus 34 (62.96 %) were from Afghanistan and 7 (12.96 %) from tribal belt between Afghanistan and Pakistan. The frequent diagnosis of esophageal carcinoma among patients from this area is also noticed in different other studies as well, and it is seen that this region is in the Iran- China belt which has the highest incidence of carcinoma of esophagus in the world¹¹ i.e 100 per 100,000 and this region is known as the “Asian esophageal cancer belt”.

Most common site of involvement by esophageal carcinoma in our study was the middle third of the esophagus i.e 32 (59.26 %) out of 54 patients having esophageal carcinoma, followed by lower third of esophageal involvement in 18 (33.34 %) out of 54 patients having esophageal carcinoma, while in the rest of the 4 (7.40 %) patients having esophageal carcinoma upper third of the esophagus was involved. Similar involvement was shown in another study from Pakistan conducted by Ahmad WU et al¹².

In our study histologically squamous cell carcinoma was more common than adenocarcinoma. Squamous cell carcinoma was found in 36 (67%) patients and adenocarcinoma was diagnosed in 18 (33%) patients. These observations regarding squamous cell carcinoma were also seen in other study reported from Singapore where squamous cell carcinoma was found in 70.1% and adenocarcinoma was found in 3.2%¹³. Squamous cell carcinoma is associated with tobacco and alcohol abuse, is common in Asia (particularly China and Singapore), and demonstrates a predilection to African Americans in the United States. In contrast, adenocarcinoma occurs mainly in Caucasian males in their 60s who have a long history of Gastro Esophageal Reflux Disease (GERD) and underlying Barrett's Mucosa^{14,15}. Although squamous cell carcinoma is the commonest type of esophageal carcinoma the incidence of adenocarcinoma of the esophagus and cardia is among the most rapidly increasing of all cancers in the United States^{16,17}.

An achalasia-like syndrome (pseudoachalasia) has been described in patients with adenocarcinoma of the cardia due to microscopic infiltration of the myenteric plexus or the vagus nerve¹⁸. Patients are usually older than sixty years, have had symptoms for less than one year, and report a significant weight loss (> 10 kg)¹⁸.

CONCLUSION

Esophageal malignancy is one of the most lethal malignancies with poor survival rate due to its propensity for early metastasis and dissemination. Elderly patients with esophageal dysphagia and weight loss and patients having dysphagia and belonging to area having high incidence of esophageal malignancies like Afghans should specifically be evaluated for the presence of esophageal malignancy as such patients are at high risk for malignancy. Although the incidence of squamous cell carcinoma of esophagus is decreasing and that of adenocarcinoma increasing throughout the world, in our study squamous cell carcinoma is still the major type of esophageal malignancy.

REFERENCES

- Jemal A, Siegel R, Ward E, et al. Cancer statistics, 2009. *CA Cancer J Clin* 2009; 59:225.
- SEER Cancer Statistics, available online at http://seer.cancer.gov/cgi-bin/csr/1975_2004/search.pl#results (Accessed January 1, 2008).
- Nigro JJ, Hagen JA, DeMeester TR, et al. Occult esophageal adenocarcinoma: extent of disease and implications for effective therapy. *Ann Surg* 1999; 230:433.
- Rice TW, Zuccaro G Jr, Adelstein DJ, et al. Esophageal carcinoma: depth of tumor invasion is predictive of regional lymph node status. *Ann Thorac Surg* 1998; 65:787.
- Folli S, Morgagni P, Roviello F, et al. Risk factors for lymph node metastases and their prognostic significance in early gastric cancer (EGC) for the Italian Research Group for Gastric Cancer (IRGGC). *Jpn J Clin Oncol* 2001; 31:495.
- Shamburek, RD, Farrar, JT. Disorders of the digestive system in the elderly. *N Engl J Med* 1990;322:438.
- Heading RC, Teblaldi M. Esophageal symptoms and motility disorders. *Medicine Inter* 2003;3:1-7.
- Jan S, Nadeem A. One year experience of treating carcinoma esophagus. *J Postgrad Med Inst* 2004;181:419-23.
- Afridi SP, Khan A, Waheed I. High risk factors in patients with carcinoma esophagus. *J Coll Physicians Surg Pak* 2000;10:14-6.
- Salih M, Abid S, Hamid SS, Shah SHI, Abbas Z, Jafri SMW. Carcinoma of the esophagus. Are we different? *J Coll Physicians Surg Pak* 2005;15:313-4.
- Ajlouni YM. Esophageal carcinoma in Jordanian field hospital in Afghanistan. *Pak J Med Sci* 2007;23:82-5.
- Ahmad WU, Qureshi H, Alam I, Zubari SJ, Jamal QS, Alam SM. Esophageal carcinoma in Karachi. *JMPA* 1992;6:133-5.
- Fernandes ML, Seow A, Chan YH, Ho KU. Opposing trends in incidence of esophageal squamous cell carcinoma and adenocarcinoma in a multi-ethnic Asian country. *Am J Gastroenterol* 2006; 101:1430-6.
- Lieberman DA, Oehlke M, Helfand M. Risk factors for Barrett's esophagus in community-based practice. GORGE consortium. Gastroenterology Outcomes Research Group in Endoscopy. *Am J Gastroenterol* 1997;92:1293.
- 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.
- Pera M, Cameron AJ, Trastek VJ. Increasing incidence of adenocarcinoma of the esophagus and esophagogastric junction. *Gastroenterology* 1993;104:510.
- Blot WJ, Devesa SS, Fraumeni JF Jr. Continuing climb in rates of esophageal adenocarcinoma: An update. *JAMA* 1993;270:1320.
- Tucker HJ, Snape WJ, Cohen S. Achalasia secondary to carcinoma: Manometric and clinical features. *Ann Intern Med* 1978; 89:315.