

Spectrum of dysphagia Etiologies in North India; A Prospective Study from a Tertiary Health Center.

Javid Iqbal¹, Shoket Mahmood², Zahur Hussain³

¹Lecturer, Department of Surgery, Government Medical College Jammu, Jammu & Kashmir, India.

²Assistant Professor, Department of Gastroenterology, Government Medical College Jammu, Jammu & Kashmir, India.

³Associate professor, Department of Surgery, Government Medical College Jammu, Jammu & Kashmir, India.

Received: April 2018

Accepted: April 2018

Copyright: © the author(s), publisher. Annals of International Medical and Dental Research (AIMDR) is an Official Publication of "Society for Health Care & Research Development". It is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Dysphagia is a commonly encountered clinical problem & limited data exist regarding the spectrum of dysphagia etiologies in this region. Our aim was to access the spectrum of dysphagia etiologies in North India. **Methods:** This was a prospective analysis of data collected over a period of four years for patients presented with complaint of dysphagia. All consenting patients presented with dysphagia irrespective of age, sex, duration and etiology of dysphagia were enrolled. After detail history, clinical examination and base line investigations, all patients underwent upper GI endoscopy, findings were noted and biopsy taken in case of pathological lesion found during endoscopy. **Results:** A total of 58 patients presented with symptoms of dysphagia were enrolled in this study. Among these patients 37 were male and 21 were female and age ranges from 17- 100 years. Thirty one patients were diagnosed to have benign pathology, four had moderate to severe dysplasia and 23 were diagnosed to have malignant pathology. Most common benign etiology was GERD and most common malignant etiology was squamous cell carcinoma. **Conclusion:** Squamous cell carcinoma and GERD are two most common etiologies for dysphagia in our study group. Dysphagia was more common in males and malignant dysphagia was more in elderly smokers and naswar users.

Keywords: Oropharyngeal dysphagia, stroke, Parkinson's disease, head injury, squamous cell carcinoma.

INTRODUCTION

Swallowing is a complex motor reflex requiring coordination among the neurologic system, the oropharynx and the esophagus. A number of disorders, both benign and malignant interfere with the swallowing process and cause dysphagia.^[1] Patients with dysphagia suffer significant social and psychological burdens associated with their symptoms of difficulty with swallowing, including anxiety with meals or avoidance of eating with others.^[2] The diagnosis of dysphagia is important because of the associated morbidity and mortality. Untreated dysphagia can lead to dehydration, malnutrition, respiratory infections and death.^[2] The elderly with symptoms of dysphagia are at increased risk of the complications of dysphagia, including aspiration pneumonia.^[3] Causes of dysphagia classified into oropharyngeal or esophageal etiologies.^[4-6] Oropharyngeal dysphagia may arise from neurologic diseases including stroke, Parkinson's disease, amyotrophic lateral sclerosis or

a Zenker's diverticula.^[4] Causes of esophageal dysphagia,^[5] include esophageal dysmotility (e.g. achalasia, diffuse esophageal spasm, nutcracker esophagus, or scleroderma), inflammation (e.g. eosinophilic esophagitis, radiation esophagitis) and structural abnormalities (e.g. malignancy, peptic strictures, esophageal rings, or external compression).

MATERIALS AND METHODS

This was a prospective analysis of data collected over a period of four years for patients presented with complaint of dysphagia at Govt. Medical College Jammu and associated hospitals. A written informed consent was taken from each patient for enrollment in the study and were also informed that standard treatment protocol will be followed as per diagnosis and patients not willing to give consent were excluded from study group. All consenting patients presented with dysphagia irrespective of age, sex, duration and etiology of dysphagia were enrolled prospectively. All patients were evaluated for symptoms such as regurgitation, chest pain, heartburn, bolus obstruction, globus sensation, respiratory symptoms and weight loss. Symptom frequency was graded as none, occasional (≤ 1 /week) and frequent (≥ 2 /week), whereas weight loss was

Name & Address of Corresponding Author

Dr Zahur Hussain
Associate professor
Department of Surgery
Government Medical College Jammu, Jammu & Kashmir,
India.

evaluated as a binary variable (yes/no). After base line investigations, all patients underwent upper GI endoscopy, findings were noted and biopsy taken in case of pathological lesion found during endoscopy. Further investigations and management was guided by endoscopic findings.

RESULTS

A total of 58 patients presented with symptoms of dysphagia were enrolled in this study. Among these patients 37 were male and 21 were female and age ranges from 17- 100 years. Thirty one patients were diagnosed to have benign pathology, four had moderate to severe dysplasia and 23 were diagnosed to have malignant pathology [Table 1]. Among benign pathology, eight patient had GERD with esophagitis, six had Achlasia cardia, five nonspecific inflammation, four central dysphagia (stroke 02 patients, brain trauma 01 patient and Parkinsonism 01 patient), two foreign body, two candidial esophagitis, two corrosive esophageal stricture, one Barrett's esophagus, one esophageal Tuberculosis [Figure 1].



Figure 1: Endoscopic image showing growth at 33cm from incisors.

Among malignant pathology squamous cell carcinoma in 14 patients [Figure 2].

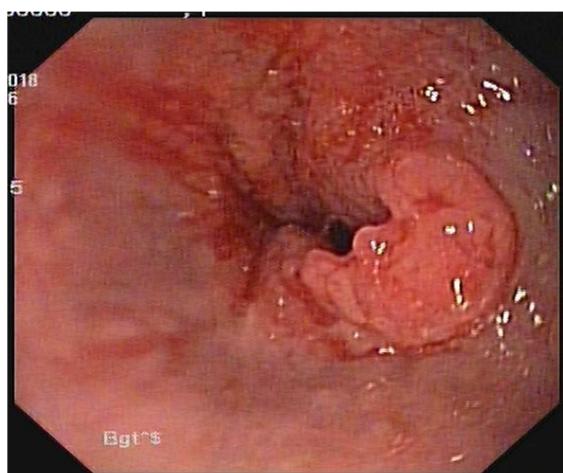


Figure 2: Endoscopic image showing semilunar growth at 20cm from incisors.

Adenocarcinoma in six patients [Figure 3], poorly differentiated carcinoma in two patients and signet ring cell carcinoma in one patient. Dysphagia was more common in males and malignant dysphagia was more in elderly smokers and Naswar users.

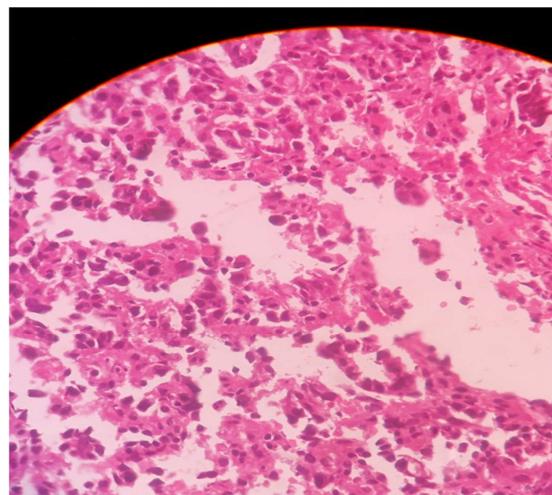


Figure 3: Photomicrograph of histology specimen of esophageal lesion showing Adenocarcinoma

Table 1: Percentage of different etiologies of dysphagia

Etiology		No. of patients	Percentage
Benign Causes			
1	GERD	8	13.7%
2	Achalasia cardia	6	10.3%
3	Nonspecific inflammation	5	8.6%
4	Central dysphagia	4	6.8%
5	Foreign body	2	3.4%
6	Candidial esophagitis	2	3.4%
7	Corrosive esophageal stricture	2	3.4%
8	Barrett's esophagus	1	1.7%
9	Esophageal Tuberculosis	1	1.7%
Moderate to severe dysplasia		4	6.8%
Malignant Causes			
1	Squamous cell carcinoma	14	24.1%
2	Adenocarcinoma	6	10.3%
3	Poorly differentiated carcinoma	2	3.4%
4	Signet ring cell carcinoma	1	1.7%

DISCUSSION & CONCLUSION

The normal swallow in humans was originally described with a three-stage sequential model. The swallowing process was classified into oral, pharyngeal and esophageal stages according to the location of the bolus.^[7,8]

Swallowing is a complex motor reflex requiring coordination among the neurologic system, the oropharynx and the esophagus. A number of disorder both benign and malignant, interfere with the swallowing process and cause dysphagia. The diagnosis and subsequent treatment of dysphagia is important because of the associated morbidity and mortality. Untreated dysphagia can lead to dehydration, malnutrition, respiratory infections and

death. The elderly with symptoms of dysphagia are at increased risk of the complications of dysphagia, including aspiration pneumonia. Several studies have identified the elderly as being at risk for the development of dysphagia.^[9,10]

Dysphagia is a commonly encountered clinical problem & limited data exist regarding the prevalence of dysphagia etiologies.^[7] It is considered an alarm symptom, raising the question of stricture or malignancy and an indication for early endoscopy.^[8] Benign esophageal tumors, while uncommon compared with esophageal carcinoma, can sometimes cause dysphagia but often have insignificant clinical outcomes. Endoscopic findings are essential for detection, diagnosis, staging, and treatment planning. Benign esophageal tumors are rare, with a prevalence $\leq 0.5\%$,^[11] while benign tumors represent 20% of esophageal Neoplasms on autopsy.^[12] In our study benign causes are responsible for dysphagia in most of the patients (53.4%) as shown in [Table 1].

Benign esophageal tumors have a lower detection rate due to the fact that most patients are asymptomatic. The majority of these benign lesions are asymptomatic, and diagnoses are often made incidentally during investigations for other symptoms.

Although biopsy or excision is required for a definitive diagnosis, understanding the endoscopic appearances provides essential help for differential diagnosis.^[13]

Since only few benign esophageal lesions attract clinical attention. Benign esophageal lesions could be detected more often with the widespread use of endoscopes, radiologic imaging,^[14] and increased awareness of the disease. Among malignant etiologies Squamous cell carcinoma (24.1%) esophagus was the most common etiology in our study group and most of these patient were elderly, smokers or Naswar users.

REFERENCES

1. Spechler SJ. AGA technical review on treatment of patients with dysphagia caused by benign disorders of the distal esophagus. *Gastroenterology* 1999;117: 233–54.
2. Ekberg O, Hamdy S, Woisard V, Wuttge-Hannig A, Ortega P. Social and psychological burden of dysphagia: its impact on diagnosis and treatment. *Dysphagia* 2002;17:139–46.
3. Marik PE, Kaplan D. Aspiration pneumonia and dysphagia in the elderly. *Chest* 2003;124:328–36.
4. Achem SR, Devault KR. Dysphagia in aging. *Journal of clinical gastroenterology*. 2005; 39:357–371.
5. Lawal A, Shaker R. Esophageal dysphagia. *Physical medicine and rehabilitation clinics of North America*. 2008; 19:729–745.
6. Humbert IA, Robbins J. Dysphagia in the elderly. *Physical medicine and rehabilitation clinics of North America*. 2008; 19:853–866.
7. Prades JM, Timoshenko AP, Asanau A, Gavid. M, Benakki H, Dubois MD, et al. The cricopharyngeal muscle and the laryngeal nerves: contribution to the functional anatomy of swallowing. *Morphol*. 2009;93(301):35–41.
8. Palmer JB, Matsuo K. Anatomy and physiology of feeding and swallowing: normal and abnormal. *Phys Med Rehabil Clin N Am*. 2008;19:691–707.
9. Mackenzie SH, Go M, Chadwick B, Thomas K, Fang J, Kuwada S, et al. Eosinophilic oesophagitis in patients presenting with dysphagia--a prospective analysis. *Aliment Pharmacol Ther*. 2008;28:1140–46.
10. Veerappan GR, Perry JL, Duncan TJ. Prevalence of eosinophilic esophagitis in an adult population undergoing upper endoscopy: a prospective study. *Clin Gastroenterol Hepatol*. 2009;7:420–6.
11. Choong CK, Meyers BF. Benign esophageal tumors: introduction, incidence, classification, and clinical features. *Semin Thorac Cardiovasc Surg* 2003; 15: 3-8
12. Attah EB, Hajdu SI. Benign and malignant tumors of the esophagus at autopsy. *J Thorac Cardiovasc Surg* 1968; 55: 396-404.
13. Tsai SJ, Lin CC, Chang CW, Hung CY, Shieh TY, Wang HY, Shih SC, Chen MJ. Benign esophageal lesions: Endoscopic and pathologic Features. *World J Gastroenterol* 2015 January 28; 21(4): 1091-1098
14. Lewis RB, Mehrotra AK, Rodriguez P, Levine MS. From the radiologic pathology archives: esophageal neoplasms: radiologicpathologic correlation. *Radiographics* 2013; 33: 1083-1108.

How to cite this article: Iqbal J, Mahmood S, Hussain Z. Spectrum of dysphagia Etiologies in North India; A Prospective Study from a Tertiary Health Center. *Ann. Int. Med. Den. Res.* 2018; 4(3):SG05-SG07.

Source of Support: Nil, **Conflict of Interest:** None declared