Acta Scientific Gastrointestinal Disorders(ISSN: 2582-1091)

Volume 2 Issue 8 October 2019

Research Article

Corrosive Induced Benign Esophageal Stricture is Leading Cause of Dysphagia in Our Part of World

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Received: August 21, 2019; **Published:** September 16, 2019

DOI: 10.31080/ASGIS.2019.02.0076

Abstract

Dysphagia is defined as difficulty and delay in the process of swallowing through the esophageal and oropharyngeal pathway. Most common cause of benign esophageal stricture in our part of world is due to corrosive injuries. These corrosive injuries are due to acids or alkalies that leads to esophageal stricture. esophageal stricture effects 66% out of 169 dysphagia patients, whereas malignancy effect 27% of patients and other causes effect 2% of patients.

Methods: The patients were selected according to the criteria from January 2017 to December 2017. The histopathological data, clinical features and demographics of dysphagia patients were collected.

Results: 169 patients of dysphagia were included in the study according to the sample size protocol. Under GI endoscopy, different causes were isolated which are responsible for the severity of dysphagia.

Conclusion: GI endoscopy should be considered as safe diagnosis method for the dysphagia. The causes of dysphagia are malignancy stricture, esophageal stricture and other causes. In the study, it is found that benign esophageal stricture due to corrosive intake is the major cause of dysphagia.

Keywords: Esophageal Stricture; Dysphagia; Endoscopy

Introduction

Dysphagia is a Greek word "Dys" meaning "with trouble or complication" and "Phagia" meaning "to swallow or eat" [1]. Thus, Dysphagia is difficulty in swallowing of food or bolus through mouth, pharynx or oesophagus to gastrointestinal cavity. Dysphagia can be due to oropharyngeal causes and esophagial disorders [2].

Oropharyngeal dysphagia occurs due to some local cause and central nervous system causes.in which patient unable to initiate swallowing. Esophageal dysphagia due to motility disorders or motor dysfunction corrosives agents like acids and alkalies being taken as suicidal attempt leads to injuries in oropharynx, esophagous and stomach, leading to stricture formation in long run. In our part of world corrosive induced strictures are leading causes of dysphagia [3].

The endoscopic findings in dysphagia effected patients are normal which is 32.5% whereas malignant oesophageal stricture is 5% and benign oesophageal stricture is 21%. The findings of reflux esophagitis is 10% [4].

The epidemiology of dysphagia is still unclear in the record of Pakistan. But the influence of dysphagia is very large on the epidemiological and individual level and it should be seen as serious threat. The prevalence of dysphagia is related to the area, state of disease, patient situation and on the region [5].

In Pakistan, the prevalence rate of dysphagia in population is much high especially in individuals with mean age of 40 to 55. The prevalence rate is 17% in people of age 44 to 49 whereas it is 22.3% in individuals with age 55 which is remarkably high [6]. In another study, it is mentioned that prevalence rate of dysphagia is at least 12% whereas it is observed in 20% - 40% patients which are also effected with other disease such as dementia, other neurological diseases and strokes [7].

The prevalence rate of dysphagia in Korea is 33.7% and in children's is 1% whereas the cases of impairment of respiratory tract is seen in 18% of children's. The mortality rate of dysphagia patients is vary on the basis of gender, region and climate [8]. The 45% - 68% of dysphagia patients along with stroke died in 6 months whereas 65.8% of older dysphagia patients effect with malnutrition [9].

Dysphagia is occurred as the results of various diseases such as peripheral nervous system disorders, neurodegenerative diseases, neuromuscular junction disorders, local anatomical lesions, myopathies, central nervous system disorder, cancer and psychogenic disorders [10]. The symptoms of dysphagia included are reduced

weight, vomiting, heart burn, starvation, anxiety, compromised immune disorders, cachexia, depression and social isolation. The most common complications of dysphagia are infection, bleeding, perforation and severe reactions to medications. Dysphagia becomes worst due to chest infections, dehydration, pneumonia and malnutrition. The diseases associated with dysphagia are cancer, Parkinson disease, gastrointestinal disease and Alzheimer disease. multiple sclerosis etc [11].

A clinical method "video flouroscopic swallowing study" is suggested for the swallowing problems and dysfunction of oropharynx. While barium studies and upper endoscopy are used to diagnose esophageal causes of dysphagia [12].

Now, the gastrointestinal endoscopy is the preferred diagnostic choice for the visualization of the lesions present in the oesophagus. On the other hand, dilations of the suspicious strictures and biopsy is also suggested along with endoscopy. Endoscopy is considered as the safest method with complications are 1 per 1000 procedures whereas the mortality rate is 0.5-3 deaths per 10,000 procedures [13].

Current study is designed to determine the number of common endoscopic findings in the dysphagia patients.

Objectives

1. To determine cause of esophagia in our part of world
2. Important endoscopic findings in dysphagia patients.

Materials and Methods

The study has been conducted in the department of gastroenterology, Pakistan Institute of Medical Sciences (PIMS), Islamabad, Pakistan. The duration of the study and data collection was from January 2017 to December 2017. The study was based on the consecutive sampling technique with sample size is 169. The groups of dysphagia patients which are included in study are esophageal stricture, malignancy, other causes and normal with margin of error is 5% and confidence interval is 95%.

In the study, both genders having dysphagia with ages more than 5 years to 100 years have been included. All of the patients involved in the study were admitted in the gastreology department of PIMS. All the patients were fully aware with the purpose, procedures and benefits of the study. Moreover, the written and verbally consents were obtained from the patients.

Before the procedure of upper gastroenterology GI endoscopy, brief history of the patients were obtained through important baseline observations and physical examinations. The GI endoscopy was performed on the basis of history and barium studies findings. The histopathology and biopsies of the patients were taken and observed by a single expert histopathologist.

The SPSS-20. software was used for the entry of all data such as percentages and frequencies. The gender was taken as categorical variable. The variables such as age and number of patients were taken as numerical variables.

Results

This study includes 169 patients undergoing GI endoscopy. The patients included in this study were of mean age 46 years with standard deviation of 19.27 years (range 5 to 100 years). Out of these, the number of males patients were 91 (54%) and females were 78(46%).

Dysphagia: 169 Age mean		46+- 19.27years Range (5-100)
Gender	Males	54% (n= 91)
	Females	46%(n=78)
Esophageal Stricture	Male Female	41.6% (n=54) 58.3%(n=58)
Malignancy	Male Female	12.5% (n=16) 20.8% (n=29)
Other causes	Male Female	16.66% (n=2) 4.16% (n=1)
Normal	Male Female	25% (n=6) 12.5% (n=3)

Table 1: Demographic and clinical data.

The number of males suffering from esophageal stricture were 54 (41.6%) whereas females number were 58 (58.3%). The malignancy stricture seen in males was 16(12.5%) and in females it was seen in 29 (20.8%). The number of male patients of dysphagia suffering from other causes were 2(16.66%) and in females it was seen in 1(4.16%). The normal male dysphagia patients were 6 (25%) and normal females number were 3(12.5%).

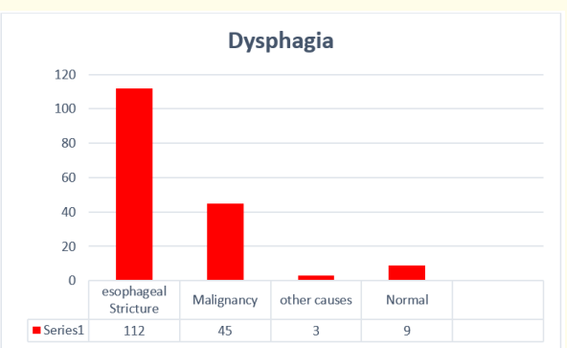

Figure 1: Different causes of Dysphagia.

Figure 2: Comparison percentage of males and females suffering from esophageal stricture.

Figure 3: Comparison percentage of males and females suffering from malignancy.

Figure 4: Comparison percentage of males and females suffering from other causes.

Figure 5: Comparison percentage of normal males and females.

Discussion

Dysphagia occurs due to number of disorders and study was conducted in Pakistan Institute of Medical Sciences (PIMS), Islamabad, Pakistan in the year of 2017. The study was conducted in the gastroenterology department of PIMS.

The total number of dysphagia patients in this study were 169 out of which 91 were males and 78 were females. The mean age of patients were 46%. The least age of patient included was 5 years old female and the eldest age was 100 years male. The females was seen more effected with ES. The percentage of females effected with (ES) were 58.3% whereas males effected were 41.6%. The ES found as the major cause of dysphagia whereas malignancy is found as second cause of dysphagia which is almost 20.8% in females and 12.5% in males.

Moreover, the esophageal stricture dysphagia is much common in patients in view of clinical record. The neurological disorders also worsen the dysphagia condition such as disorder in central nervous system and neurodegenerative disease [14]. The frequency and prevalence of esophageal stricture data is unclear in Pakistan but in few last years it is reported in literature that about 22.3% of elder individuals up to 50 years were suffering with ES. So, the ES dysphagia is common in both males and females [15].

Benign esophageal causes due to corrosive injuries are main cause of dysphagia and it is serious alert as number of suicidal attempts also increases day by day [16].

In this study, total of 169 patients were selected out of these, ninety one were males and 78 females. So, from the study it is found that males are more likely to effect with dysphagia as compared to females. The prevalence rate of dysphagia in patients is varied on the basis of country, gender, area and age [17]. This study is conducted in one hospital of one city of Pakistan, the number of patients varied in different hospitals of different areas. However, the results in this study is predicted on the basis of data collected in one year.

Conclusion

Dysphagia is a problematic and common disease especially in old people of age up to 40 years. From this study, it is concluded that dysphagia is more common in males as compared to females. From the endoscopy finding, it is seen that the major cause of dysphagia is esophageal stricture which is 58% in females and 54% in males where the other causes of dysphagia are malignant stricture, and corrosive induced esophageal stricture is leading cause of dysphagia and steps should be taken at national levels in order to educate the peoples regarding complications of corrosive injuries so many lives can be saved through proper counseling and educa-

tion of peoples.. The upper GI endoscopy is very effective and safe method in case of both therapeutic and diagnostic value and it is a gold standard tool due to its structural use. It should be considered as the earliest method of diagnosis in dysphagia patients.

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Volume 2 Issue 8 October 2019