Section: Medical Gastroenterology

Original Research Article

CLINICAL CHARACTERISTICS OF PATIENTS AND OUTCOMES OF OESOPHAGEAL MANOMETRY IN A TERTIARY CARE CENTRE IN SOUTHERN INDIA

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Abstract

Background: High-resolution esophageal manometry (HREM) is a technique to determine the pressure pattern which is a function of esophageal musculature and integrity of LES. The indications for HREM evaluation include evaluation of nonobstructive dysphagia, symptoms of regurgitation and noncardiac or atypical chest pain unexplained by endoscopic evaluation. Aim: To analyse clinical profile of esophageal motility disorders in patient presenting with refractory gastroesophageal reflux disease (GERD), dysphagia and atypical chest pain in tertiary care centre in Southern india. **Materials and Methods:** We enrolled patient presented with refractory GERD, dysphagia and atypical chest pain from june 2022 to jan 2023 at Department of Medical Gastroenterology, Govt Stanley Hospital, Upper GI endoscopy and high-resolution esophageal manometry was done in all patients. **Result:** Esophageal manometry was normal in 21 (42%) patients, Ineffective esophageal peristalsis in 13 (25%), achalasia cardia in 6 (12%), EGJ outflow obstruction in 5 (8.5%), hypercontractile esophagus in 2 (5.6%), fragmented peristalsis in 3 (4.6%) patients were identified. **Conclusion:** So as observed in other studies comman indications for manometry were symptoms like dysphagia, gastro esophageal reflux and atypical chest pain. Most comman finding on HRM are ineffective esophageal motility, achalasia cardia and hypercontractile esophagus.

INTRODUCTION

Evaluation of Esophageal motility has long been an important tool to assess patient's motor esophageal symptoms. In recent times, with the introduction of high-resolution manometry (HRM) has lead to a better understanding of pathophysiologic mechanisms of motility disorders. HRM has also allowed us to derive sophisticated analytical algorithms for these motility disorders. It provides image-based manometric interpretation with significant advantages over conventional manometry and, in addition, HRM has also been proved friendly use, easy to learn, improved patient comfort and diagnostic yield.

Two types of HRM systems are currently available: water-perfused HRM and solid-state HRM. Both systems have more and closer pressure sensors than the conventional manometry, and the pressure topography used in the HRM gives detailed information of the whole esophagus and parts of the pharynx and the stomach. However, HRM data derived from both systems may vary and are influenced and depend on the perfusion rate, catheter diameter and solid-state sensors that has electronic pressure sensors within the catheter itself.[1]

The Chicago Classification is used to categorized esophageal motility disorders by using metrics from esophageal high-resolution manometry (HRM) Chicago classification version 4.0 (CCV4.0) provides the current updated criteria for diagnosis and classification of esophageal motor disorders.[2,3]

Aim

The aim of this study is to study the clinical profile and outcome of HRM in patients undergoing HRM at a tertiary care centre in southern India.

MATERIALS AND METHODS

Inclusion Criteria

1. All patients above age> 18 years.
2. Symptoms of dysphagia, odynophagia, gastroesophagealreflux (GERD), or noncardiac chest pain, undergoing esophageal manometry.

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Exclusion Criteria

1. Age< 18 years.
2. Not able to obtain consent either from patient or near relative.
3. Systemic diseases ex: DM/HTN/CAD/ CKD/ TB/HIV.

50 patients were enrolled in our study from July 2022 to December 2022, who underwent HRM at the Department of Medical Gastroenterology, Govt. Stanley Medical College, Chennai. All patients underwent upper GI Endoscopy prior to HRM, and patients with mechanical obstruction, gastric ulcers and esophageal strictures were excluded.

This study was approved by Institutional ethics committee.

RESULTS

A total 50 patients underwent esophageal manometry during the study period. Mean age of patients was 43.85 ± 16.6 years.The cohort included 23 {46%}males and 27 (54%) females. Indications of esophageal manometry was refractory regurgitation in 20 (40%), dysphagia in 17 (34%) and atypical chest pain in 13 (26%) patients

Esophageal manometry was normal in 21 (42%) patients, Ineffective esophageal peristalsis in 13 (25%), achalasia cardia in 6 (12%), EGJ outflow obstruction in 5 (8.5%), hypercontractile esophagus in 2 (5.6%), fragmented peristalsis in 3 (4.6%) patients were identified.

Table 1:

Indication & Endoscopy Patients	Patients	%
Regurgitation	18	36
Atypical chest pain	14	28
Dysphagia	18	35
Normal endoscopy	32	64
Hiatus hernia	12	25

Table 2:

Diagnosis	Number	%
Normal	21	42
Ineffective esophageal motility	13	26
Achalasia cardia	7	14
EGJ outflow obstuction	4	8
Hypercontractile esophagus	3	6
Fragmented peristalsis	2	4

Statistical Analysis

Using Continuous variables, means and standard deviations were summarised for normally distributed data. The medians and inter-quartile ranges were used to describe non-nominal data.

We studied the manometry findings of all patients who underwent HRM at our centre from July 2022 to December 2022. A total of 50 patients of varied age underwent HRM. Most common complaint was refractory GERD followed by dysphagia. Most common finding on HRM was ineffective esophageal motility.

DISCUSSION

A study by Serrano et al. observed in 71 patients, 45% of the patients in the study were females and 55% were males, with a mean age of 61.5± 16.2 yrs. (range 20–87 years old). Most common presentation was dysphagia 85% of cases) followed by reflux (45% of cases) (n = 31), chest pain (23% of cases) (n = 13), heartburn (13% of cases) (n = 9), weight loss (6% of cases) (n = 4) and cough (4% of cases) (n = 3).[4] Rehman et al. described Achalasia as a comman finding. (35.6% of 202 patients) and Cisternas et al. noted achalasia among 31.2% of 426 patients.[5,6] A study done under Ray E. Closue et al. in which a total of 210 patients were referred for esophageal manometry. The most comman indication for referral was to evaluate the cause for atypical chest pain (with or without heartburn) in 72 patients (34%), dysphagia (with or without chest pain or heartburn) in 91 patients (43%), and heartburn alone in 14 patients (7%). Eighteen patients (9%) were referred to clarify the presumed diagnosis of achalasia, and 15 (7%) were referred for various other reasons.[7]

So as observed in other studies comman indications for manometry were symptoms like dysphagia, gastro esophageal reflux and atypical chest pain.

Most comman finding on HRM are ineffective esophageal motility, achalasia cardia and hypercontractile esophagus.

CONCLUSION

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