# What Does the Manometry Say? Evaluating Esophagogastric Junction Outlet Obstruction

Sara Byrd, MD[1,2]; Nicholas Catanzaro[1,2]; Anshya Tewari[3]; Ayesha Siddiq[1,2]; Hyo Yang, MD[1,2]; Mujjahid Abbas, MD[1,2];Leena Khaitan, MD MPH [1,2]

[1]University Hospitals Cleveland Medical Center – Cleveland, OH, [2]Case Western Reserve University – Cleveland, OH, [3]Northwest Ohio Medical University – Rootstown, OH

## Introduction

**High resolution manometry (HRM) is the gold standard for diagnosing esophageal motility disorders**

**Esophagogastric junction outflow obstruction (EGJOO) identified as an elevated integrated relaxation pressure (IRP) on HRM**

**EGJOO has a clear management strategy when in line with achalasia and hiatal hernia.**

**Aim: To compare manometric and clinic features of EGJOO to achalasia and hiatal hernia and see if these measures can help define management strategies**

## Methods

- **Retrospective chart review 2017-2021**
- **Single tertiary care institution**
- **EGJOO group refers to those not clearly associated with hiatal hernia or achalasia**
- **Patients identified using Chicago Classification v3.0**
- **Comparison: Continuous variables were compared using ANOVA with Turkey post-hoc testing and categorical variables were analyzed with Chi-square tests**

## Results

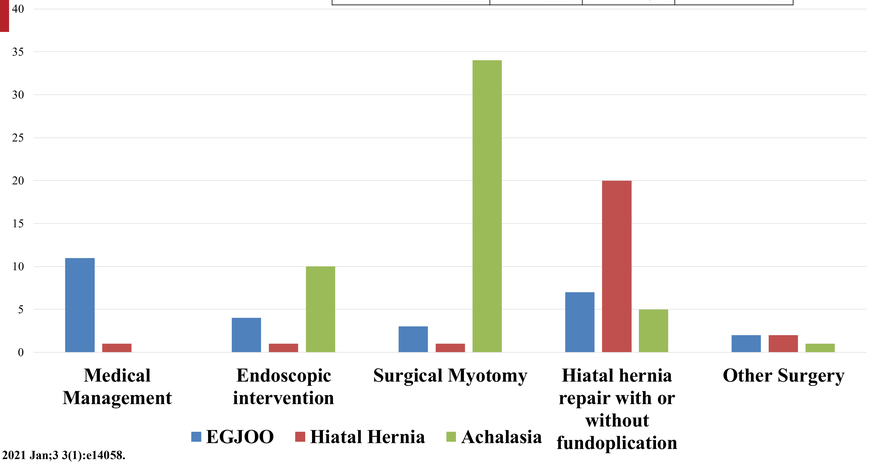
| | EGJOO (n= 29) | Hiatal Hernia (n= 23) | Achalasia (n=50) | p-value |
|---|---|---|---|---|
| *BMI* | 33.15 ± 7.50 | 29.25 ± 9.86 | 28.85 ± 5.94 | 0.06 |
| *Age* | 64.59 ± 12.52 | 59.74 ± 16.76 | 61.0 ± 14.06 | 0.36 |
| *Gender* | | | | 0.03 |
| *Female* | 22 | 17 | 25 | |
| *Male* | 7 | 6 | 25 | |
| *GERD Symptoms* | 28 | 22 | 43 | 0.19 |
| *PPI Use (Yes)* | 21 | 12 | 36 | 0.2 |

**Figure 1.** Patient Characteristics

| | EGJOO | Hiatal Hernia | Achalasia |
|---|---|---|---|
| *LESP* | 31 | 30 | 48 |
| *Median IRP* | 17 | 25 | 34 |
| *Median DCI* | 3337 | 1524 | 2475 |
| *DEA* | 120 | 91 | 72 |

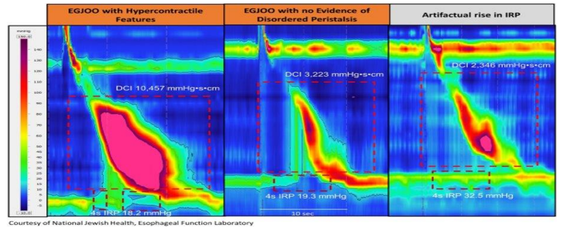
**Figure 2.** Manometric Findings

**Figure 3.** Management




- **EGJOO trended toward higher BMI**
- **EGJOO demonstrated preserved peristalsis with higher distal esophageal amplitude and lower IRP's**
- **EGJOO was most often managed medically, followed by hiatal hernia repair and endoscopic. Myotomy was least likely intervention.**

**Figure 4**




## Conclusion

1. **EGJOO manometrically is on a spectrum between achalasia and hiatal hernia with more preserved esophageal function.**
2. **Intervention is unclear in this group and many still managed medically**
3. **Manometry of EGJOO more closely resembles hiatal hernia in terms of LESP and Median IRP and management is reflected with these findings**
4. **EGJOO remains a challenging diagnosis to determine the most effective intervention.**

4. Yadlapati R, et al. Esophageal motility disorders on high-resolution manometry: Chicago classification version 4.0©. Neurogastroenterol Motil. 2021 Jan;3 3(1):e14058.