DIAGNOSTIC YIELD OF HIGH-RESOLUTION MANOMETRY IN PATIENTS WITH ESOPHAGEAL MOTILITY DISORDERS

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ABSTRACT

Background: Advances in high-resolution esophageal manometry (HREM) have overturned the clinical assessment of esophageal motility disorders. It has been widely incorporated into clinical practice as it is a delicate diagnostic tool for assessing esophageal motility patterns.

Objective: To assess the diagnostic ability of HRM in categorization of esophageal motility disorder using the Chicago Classification v3.0

Patients and Methods: a retrospective descriptive study done on 100 adult patients who underwent esophageal manometry test in the Endoscopy unit of Gastroenterology and Hepatology center at Azadi Teaching Hospital in Duhok city. The study was conducted from January 2021 to March 2022 by reviewing the high-resolution esophageal manometry of these patients using the Chicago classification v3.0. The recorded esophageal symptoms were correlated with the findings obtained during HREM test.

Results: The mean age of the participants was 44.8 years with a standard deviation of 16 year. Females were on average older than males with a mean age of 47.8 years compared to 41.2 year for males. More than half of the patients (53%) had dysphagia as the main symptom that HRM done for. Globus sensation was the second one (14%) followed by Gastroesophageal reflux disease (GERD) (13%). The yield of HRM found to be abnormal (77%) as esophageal motility disorders. Those patients with dysphagia had achalasia II as the highest frequency (28.3%), while no even one patient of those with GERD, globus sensation or nausea and vomiting had achalasia detected by HRM. The most frequent result of GERD patients was esophagogastric junction outflow obstruction (38.5%). More than half (57.1%) of patients with globus sensation had a normal HRM test. Distal esophageal spasm was found to be the most frequent finding among patient with non-cardiac chest pain.

Conclusion: There is an apparent diagnostic value of HRM in categorization of esophageal dysmotility when applying the Chicago Classification v3.0 in those patients with suggestive symptoms of motility disorders.

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Keywords:*; Achalasia; Dysphagia; Chicago; Esophageal Manometry classification; Esophageal motility disorder; High-Resolutio.*

Motility disorders of the esophagus are not uncommon in patients with gastrointestinal problems. These conditions vary from the well-known fundamental esophageal motility abnormalities to those non-specific conditions that may impair esophageal function more subtly and otherwise go unnoticed. As symptoms of underlying illnesses, esophageal motility disorders, also known as secondary motility disorders, can develop.[1]

Because it may directly visualize the mucosa and rule out benign or malignant disorders that could induce secondary motility problems, endoscopy is a crucial diagnostic technique in the evaluation of patients with suspected esophageal dysmotility. However, when there are no abnormalities found, esophageal

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manometry is typically the next crucial step in the diagnosis of motility disorders of the esophagus.[2]

Advances in high-resolution esophageal manometry (HREM) have overturned the clinical assessment of esophageal motility disorders. Researchers have demonstrated that HREM is superior to the conventional manometry, and more sensitive in detecting motility disorders of the esophagus.[2-4] When it is compared with the conventional manometry, the best diagnostic test for esophageal motility problems is considered to be HRM because it provides more comprehensive information on the condition. In contrast to conventional manometry, which typically places the sensors 3-6 cm apart, this method places 20–36 pressure sensors at one cm intervals. These pressure signals over viewed by utilization of a color plots, called pressure topography, which enable rapid and accurate interpretation. A categorization system, known as the Chicago classification, has been established to enable the objective analysis of HRM measurements and topography.[5,6]

The Chicago Classification v3.0 is a hierarchical analytic flow chart applied to categories an esophageal dysmotility diagnosis. The first determinants point starts with the detection of an esophagogastric junction outflow obstruction based on an increase in the median integrated relaxation pressure (IRP) (>15mmHg using the Sierra system).[5,7]

Esophagogastric junction outflow obstructive abnormalities are more categorized on the bases of contractility patterns and pressurization patterns. Achalasia type I, also termed classical achalasia is defined by absence of contractility without evidence of pan esophageal pressurization. In contrast, when EGJ outflow obstruction is founded in association with pan esophageal pressurization in at least 20% of the swallows, type II achalasia is diagnosed. Finally, in type III achalasia, also known as spastic achalasia, the contractility is detected with at least 20% of the swallows considered premature. Cases with an elevation of the median IRP that do not meet the criteria for the three subtypes of achalasia are defined as Achalasia variant.[7]

Esophageal manometry measures the amplitude of contractile events in the esophagus and its sphincters in relation to time to evaluate esophageal motility patterns. Esophageal dysmotility disorders detected by manometry include achalasia, diffuse esophageal spasm (DES), hypertensive lower esophageal sphincter (LES), nutcracker esophagus, ineffective esophageal motility (IEM) and hypotensive LES.[8] Dysphagia and non-cardiac chest pain are among the frequently encountered symptoms in clinical practice which direct the physician's investigations toward the esophagus as the primary focus of pathology and HRM as a diagnostic tool of option.[9] Other possible symptoms of esophageal disease which indicated HREM as a tool for investigation include; regurgitation, weight loss, nocturnal cough, and aspiration.[10]

High-resolution manometry, an advanced diagnostic technique for evaluating esophageal motility patterns, is frequently used in clinical settings. Careful evaluation of the baseline phase and each swallow is necessary for interpreting esophageal HRM, and findings must be synthesized to arrive at a motility diagnosis.[7]

This article unfolds a first-time view on HRM data among a group of patients in Duhok province, Kurdistan Region, Iraq. The aim of the study is to assess the diagnostic ability of HRM in categorization of esophageal motility disorder using the Chicago Classification v3.0

PATIENTS AND METHOD

In this descriptive study the results of high-resolution esophageal manometry of 100 adult patients from both sexes were reviewed. The patients were those who underwent esophageal manometry test in the Endoscopy unit of Gastroenterology

and Hepatology center at Azadi Teaching Hospital in Duhok city, from January 2021 to March 2022. They were retrospectively reviewed and interpreted by gastroenterologists experienced in HREM interpretation, using the Chicago classification v3.0 showed in figure (1).[11]

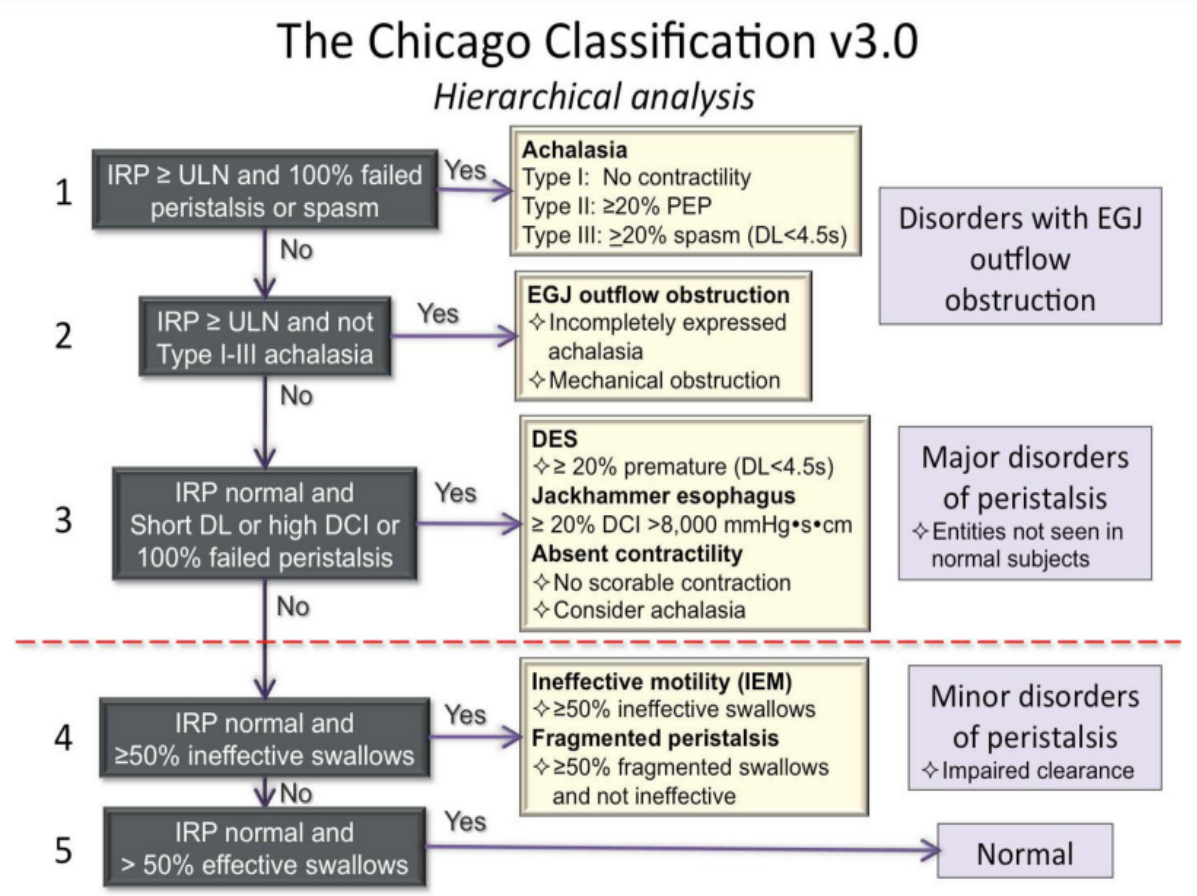

Figure 1: The flow chart of Chicago Classification v3.0

Using ManoScan ESO catheter with 36 pressure channels spaced 1 cm apart, esophageal HREM study was performed for all patients after 8 hours fasting period. All patients completed the 10 test swallows protocol were after insertion of the catheter trans nasally, the participant lie in a semi sitting position and firstly asked to stop swallowing for 30 second to adjust baseline resting LES pressure, later on the participants were ordered to swallow 5 ml of water repeatedly at 30 second intervals between each swallow. After completion of the test, automatic landmarks (upper esophageal sphincter UES, transition zone, lower esophageal sphincter LES, pressure inversion point PIP and gastric marks) were revised and adjusted manually, and then the recorded data were analyzed using the Chicago classification v3.0 hierarchal analysis chart. (Figure 2)[12]

Assessment of lower esophageal sphincter was done by calculating (IRP 4 s), that is measured by detecting the mean of the lowest LES pressure over 4 seconds measured in the 10 s interval after UES relaxation window. An (IRP 4 s) regarded high when it was equal or exceeding 15 mmHg.

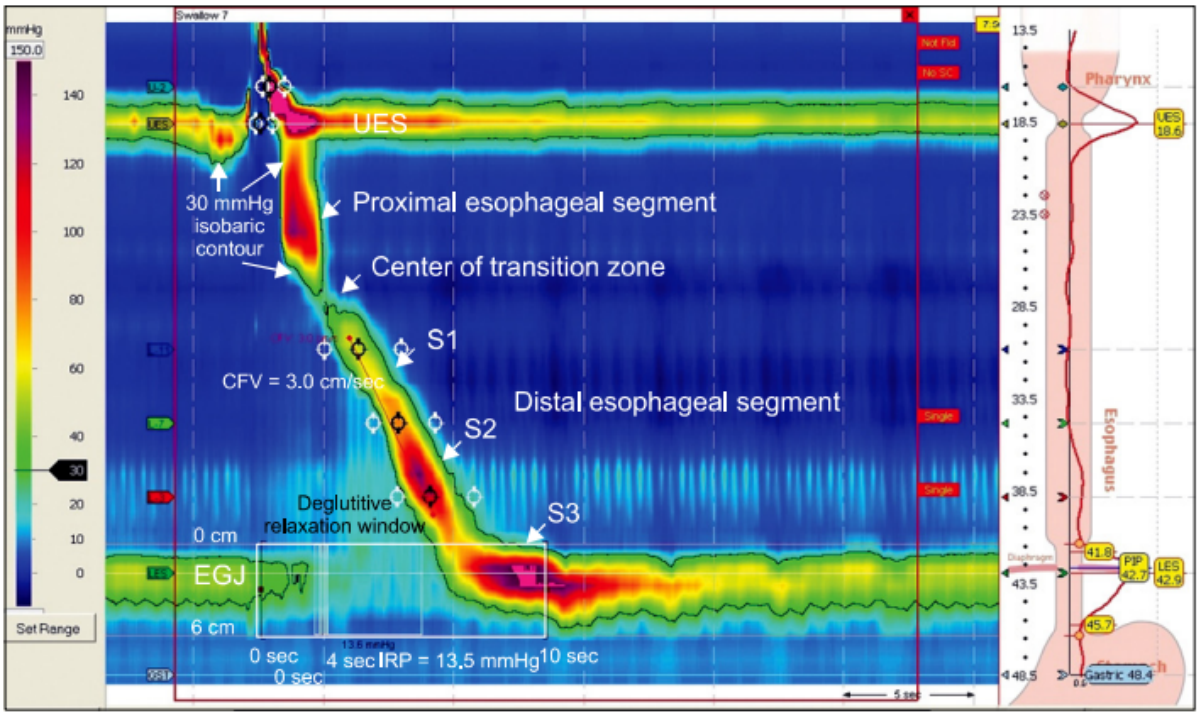

Figure 2: Normal HREM Topography

Dysphagia, symptoms of acid reflux, the non-cardiac chest pain, also globus sensation, and nausea/vomiting or belching were grouped as the primary esophageal symptoms or the indications for doing esophageal manometry. Prior to having HRMs, the majority of patients had upper endoscopies. Age and gender-specific demographic information on the patients was also gathered.

We categorized the HRM findings into achalasia, EGJ outflow obstruction, hyper contractile esophagus, distal esophageal spasm (DES), also ineffective esophageal motility, and normal findings in accordance with Chicago classification v3.0.

The statistical analysis of data

Analysis of the data of the study was done by Statistical Package of Social Sciences SPSS version 26. Categorical data as gender, symptoms and HRM results were summarized and displayed as frequency and percentages, while numerical data of age and IRP measurement were summarized as mean and standard deviation SD. The association and differences in HRM outcome and results with categorical variables was assessed using Chi squared test and those with continuous variables done with independent t-test. The level of significance for the p-value was set at 0.05.

Ethical Consideration

The study got the approval from the research ethics committee of the Directorate General of Health in Duhok. Informed consent was taken from patients for using their HRM results and official consent was taken from Azadi' hospital for using the data.

RESULTS

One hundred patients involved in this study had HRM done for them. Females were slightly more than males as 54% of them were females. The mean age of the participants was 44.8 years with a standard deviation of 16 year. Females were on average older than males with a mean age of 47.8 years compared to 41.2 year for males as shown in table (1).

Table (1): Age-gender classification of the study participants

Gender	No. (%)	Age in years Mean (SD)
Male	46 (46.0)	41.2 (16.75)
Female	54 (54.0)	47.8 (14.82)
Total	100 (100.0%)	44.8 (16.00)

More than half of the patients (53%) had dysphagia as the main symptom that HRM done for. Globus sensation was the second one (14%) followed by GERD (13%). Finally, nausea, vomiting and belching same as NCCP were the least frequent symptoms with 10% of patients. These are seen in figure (1).

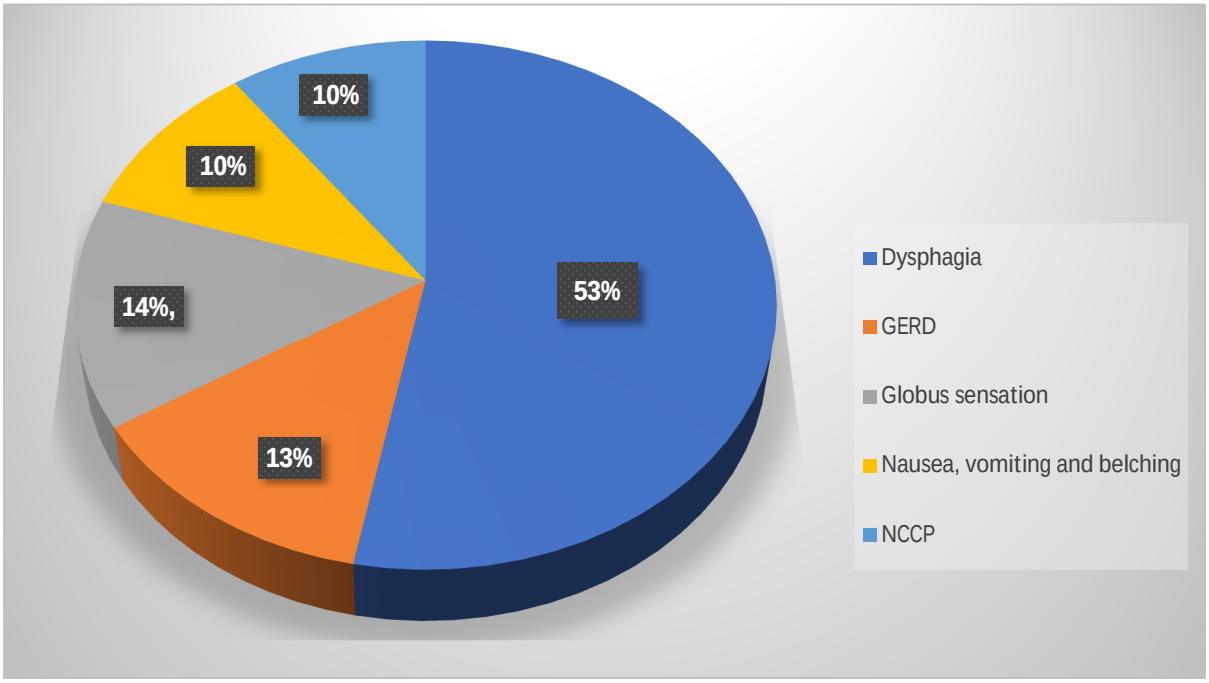

Figure (1), Different symptoms the patients presented with

Table 2 shows that the yield of HRM found to be normal in 23% and abnormal (77%) as esophageal motility disorders. Of the 10 patients presented with NCCP, 9 of them (90%) had abnormal HRM results. The second symptom with high rate of abnormal HRM was dysphagia (86.8%) followed by nausea, vomiting and belching (70%) then GERD (69%) and finally globus sensation (42%). These different frequencies were statistically significant when tested by Chi squared test.

Table (2): HRM outcome in relation to the patients' symptoms

	HRM		
Symptoms	**Normal No. (%)**	**Abnormal No. (%)**	**p-value**
Dysphagia	7 (13.2)	46 (86.8)	0.008
GERD	4 (30.8)	9 (69.2)	
Globus sensation	8 (57.1)	6 (42.9)	
Nausea, vomiting & belching	3 (30.0)	7 (70.0)	
NCCP	1 (10.0)	9 (90.0)	

The esophageal motility disorders that were considered abnormal HRM results include: Achalasia with its three types (Achalasia I, II and III), DES, EGJ outflow obstruction and ineffective motility. Those patients with dysphagia as the main symptom had all these six outcomes appeared in different frequencies with achalasia II as the highest frequency (28.3%) then EGJ outflow obstruction (17%). No even one patient of those with GERD, globus sensation or nausea and vomiting had achalasia detected by HRM. The most frequent result of GERD patients was EGJ outflow obstruction (38.5%). More than half (57.1%) of patients with globus sensation

had a normal HRM test and the commonest abnormal yield among them was ineffective motility (21.4%). Those with nausea and vomiting also had ineffective motility as the most frequent result (40%) and a normal HRM in 30% of them. Esophagogastric junction outflow obstruction and DES were found to be the most frequent finding among patient with NCCP as the main presenting symptom. Figure (2).

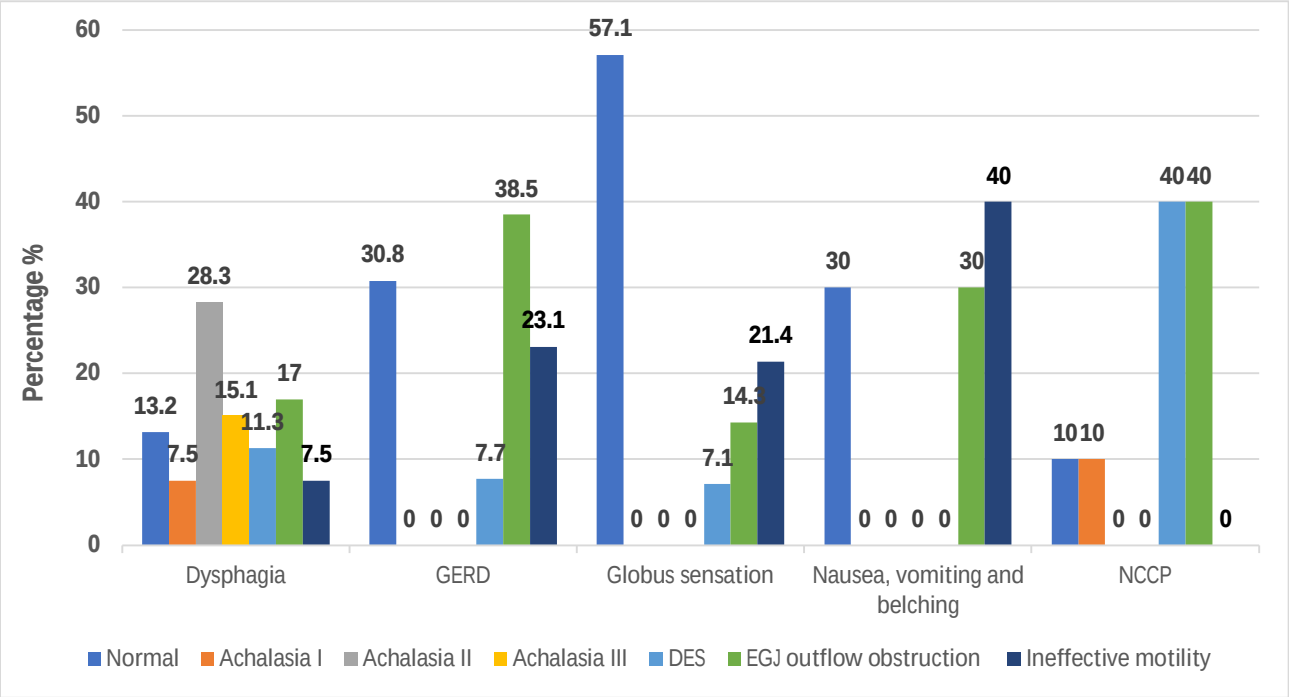

Figure (2), Different HRM results in relation to the symptoms

The mean integrated relaxation pressure IRP in mmHg was 11.06 among those with normal HRM results compared to 23.84 mmHg in those with abnormal HRM, and this difference was statistically significant as shown in table (3).

No statistically significant difference was seen between males and females in regard to the mean IRP measure as seen in table (4).

Table (3): IRP measurement in relation to the HRM outcome

HRM	IRP (mmHg) Mean (SD)	p-value
Normal	11.06 (3.46)	< 0.001
Abnormal	23.84 (14.6)	

Table (4): IRP measurement in relation to the gender of patients

Gender	IRP (mmHg) Mean (SD)	p-value*
Male	21.67 (14.23)	0.61 (NS)
Female	20.25 (13.88)	

The mean age of patients with normal HRM results was 46.09 years and a standard deviation of 14.65 year compared to a mean of 44.38 and SD of 16.46 years among those with abnormal HRM results. This difference was statistically not significant. Table (5)

Table (5): Age of the patients in relation to the HRM outcome

HRM	Age (yr.) Mean (SD)	p-value
Normal	46.09 (14.65)	0.66 (NS)
Abnormal	44.38 (16.46)	

DISCUSSION

High resolution esophageal manometry is an important diagnostic tool that uses closely spaced (< 2 cm) pressure sensors for evaluating esophageal motility disorders. The test is considered to be a gold standard for evaluating esophageal motility disorders. The data are analyzed using the

Chicago Classification v3.[3,13] Patients complaining from dysphagia, non-cardiac chest pain or those who suffer from GERD require HREM for a better assessment of the esophageal motility.

Patients who present with dysphagia should be taken as an alarming sign as a normal HRM could only be found in 29% of the cases, while 88.7% of the abnormal cases could suffer from major esophageal motility disorder.[13] In our study, 23% of patients under went HREM were found to be normal, and 77% were found to suffer from major esophageal motility disorder, similar to the results obtained by Jandee et al.[13]

This study found that in more than half of patients who underwent HREM the main complaint was dysphagia and of those (88.6%) had an abnormal HREM. The second common encountered symptom was Globus sensation followed by GERD. Non-cardiac chest pain, same as nausea, vomiting and belching were the least frequent symptoms. The finding were comparable to results of a study by Naguib et al.[14] where dysphagia was found to be the main symptom and chest pain was the least one, and contrary to a study done by Jandee et al. where dysphagia was the primary indication for HREM (49.8%) after which come GERD (17.4%) and the majority of which were refractory cases.[13]

Evaluation of the anticipating ability of esophageal symptoms for major finding on HREM was tried through this study, these esophageal motility disorders that were considered abnormal HRM results include: Achalasia with its three types (Achalasia I, II and III), DES, EGJ outflow obstruction and ineffective motility. For those with dysphagia as a main symptom all these dysmotility disorders were recorded and the highest frequency was for type II achalasia (28.3%) similar to a recent study by Roman et al., while no any case of achalasia is recorded in those patients whose main symptom is GERD, globus sensation or those with nausea and vomiting.[15]

Achalasia is a disease characterized by absence of the peristalsis also a faulty relaxation of the LES, which causes a decrease in bolus transport and food stasis in the esophagus. According to the Chicago classification, the disease achalasia is diagnosed when there is a high IRP combined with an ineffective peristalsis or spasm.[5] Although the onset before the adolescence is rare, it can affect all age groups and patients are usually diagnosed between the age of 25 and 60 years. Achalasia has a prevalence of 10 cases per 100,000 individuals.[10,16]

An incomplete relaxation of the LES (elevated median IRP) along with an intact or weak peristalsis constitutes the manometric diagnostic of EGJ outflow obstruction. Despite being relatively uncommon, it is being diagnosed more frequently as a result of the rising usage of HRM.[17] In this study EGJ outflow obstruction detected more in those with NCCP and those with GERD in contrary of a study done by F.B. Van Hoeij et al., where the majority of patients (91%) presented with dysphagia or retrosternal chest pain, but his study sample was small, 47 patients and the diagnosis of EGJ outflow obstruction confirmed in only 34 patients by HREM.[18]

More than half of patients with globus sensation in this study had a normal HRM test. On the other hand, ineffective esophageal motility was the common, similar to the study by Jandee et al. where (65.4%) of test finding were normal. A diagnosis of ineffective esophageal motility is made when more than 50% of swallows fail (distal contractile integral - DCI 50% of swallows with a wide break (>5 cm) and do not meet the criteria for ineffective esophageal motility).[17]

The mean integrated relaxation pressure in mmHg statistically showed significant high level among those with abnormal HREM in compare with those with normal HREM and this confirm that IRP is the main determinants point for detection of an EGJ

outflow obstruction and categorization of esophageal motility disorders when applying the Chicago Classification v3.0 .

Lastly there was no significant difference between males and females in regard to the mean IRP measure and at the same time the mean age of patients with normal HRM results was 46.09 years compared to a mean of 44.38 years among those with abnormal HRM results and this difference was statistically not significant. Comparable to these findings are the results of a study done by Mohammed O. et al were they found a obvious statistical difference with regard to the age of presentation but no significant statistical difference with regard to sex.[19]

So far, this study is the first of it is kind to analyze data from a tertiary hospital in Duhok, province, Kurdistan region Iraq, using high resolution esophageal manometry according to the latest Chicago classification version 3. The only limitation that faced the study was the small sample size. The small sample size, in this study, has been directly attributed to one of the devices disadvantages, expensiveness, which limited further assessment of patients in our center.

CONCLUSION:

There is an apparent diagnostic value of HRM in categorization of esophageal dysmotility when applying the Chicago Classification v3.0 in those patients with suggestive symptoms of motility disorders.

CONFLICT OF INTEREST:

The author declares no conflict of interest.

REFERENCES

1. Massey BT. Esophageal Motor and Sensory Disorders: Presentation, Evaluation & Treatment. Gastroenterol Clin N Am 2007; 36: 553–575.
2. Chicago Classification of Esophageal Motility Disorders: Lessons Learned W. O. A. Rohof1 & A. J. Bredenoord, Curr Gastroenterol Rep (2017) 19: 37
3. Fox MR, Pandolfino JE, Sweis R, Sauter M, Abreu YAAT, Anggiansah A, et al. Inter-observer agreement for diagnostic classification of esophageal motility disorders defined in highresolution manometry. Dis Esophagus. 2015; 28(8):711–9
4. Gyawali CP, Patel A. Esophageal motor function: technical aspects of manometry. Gastrointest Endosc Clin N Am. 2014; 24:527–43.
5. Kahrilas PJ, Bredenoord AJ, Fox M, Gyawali CP, Roman S, et al. The Chicago classification of esophageal motility disorders, v3.0. Neurogastroenterol Motil. 2015; 27(2): 160–74.
6. Grübel C, Hiscock R, Hebbard G. Value of spatiotemporal representation of manometric data. Clin Gastroenterol Hepatol. 2008; 6:525–530
7. Rena Yadlapati, MD, High-Resolution Esophageal Manometry: Interpretation in Clinical Practice. Curr Opin Gastroenterol. 2017; 33(4): 301–309.
8. Wang A, Pleskow DK, Banerjee S, Barth BA, Bhat YM, Desilets DJ, et al. Esophageal function testing. Gastrointest Endosc 2012; 76 (2): 231-243.
9. Douglas G. Adler, Yvonne Romero. Primary Esophageal Motility Disorders. Mayo Clinic Proceedings. 2001;76(2):195-200.
10. Patel, D. A., Lappas, B. M., & Vaezi, M. F. An Overview of Achalasia and Its Subtypes. Gastroenterology & Hepatology. 2017;13(7), 411-421.
11. van Hoeij FB, Bredenoord AJ. Clinical Application of Esophageal High-resolution Manometry in the Diagnosis of Esophageal Motility Disorders. J Neurogastroenterol Motil. 2016; 22(1): 6-13

12. Pandolfino JE, Fox MR, Bredenoord AJ, Kahrilas PJ. High-resolution manometry in clinical practice: utilizing pressure topography to classify oesophageal motility abnormalities. Neurogastroenterol Motil 2009; 21: 796-806
13. Jandee S, Jandee K. Diagnostic Yield of High-resolution Esophageal Manometry With Chicago Classification Version 3.0 in Thai Patients. J Neurogastroenterol Motil. 2021 Oct 30; 27(4): 533-539.
14. Gina Gamal Naguib, Mohamed Hassan, Ahmed I. Elshafie & M. G. Naguib, Esophageal motility abnormalities in Egyptian patients using high resolution esophageal manometry: a descriptive study; The Egyptian Journal of Internal Medicine. 2022; 34(1)
15. Roman S, Huot L, Zerbib F, Bruley des Varannes S, Gourcerol G,Coffin B, et al. High-resolution manometry improves the diagnosis of esophageal motility disorders in patients with dysphagia: a randomized multicenter study. Am J Gastroenterol. 2016; 111(3): 372– 80.
16. Spechler, S. J. (2022, September). UpToDate. Retrieved October 28, 2022, from https://www.uptodate.com/contents/achalasia-pathogenesis-clinical-manifestations-and-diagnosis
17. Rohof WOA, Bredenoord AJ. Chicago Classification of Esophageal Motility Disorders: Lessons Learned. Curr Gastroenterol Rep. 2017; 19(8): 37.
18. Van Hoeij FB, Smout AJ, Bredenoord AJ. Characterization of idiopathic esophagogastric junction outflow obstruction. Neurogastroenterol Motil. 2015; 27(9): 1310–6.
19. Mohammed MO, Salim BF, Ramadhan AA. Esophageal manometry among patients with dysphagia referred to Kurdistan center for gastroenterology and hepatology. Advanced Medical Journal. 2015; 1(1): 34-42.

پوختە

بەرهەمی دەستنیشانکردنی پەستانپێوانی وردبینی بەرز لە نەخۆشانی تووشبوو بە تێکچوونی جوولەی سورێنچک

پێشینە: پێشکەوتنەکان لە پەستانپێوانی سورێنچک بە ڕوونی بەرز (HREM) هەڵسەنگاندنی کلینیکی تێکچوونەکانی جوولەی سورێنچکیان گۆڕیوە. بە شێوەیەکی بەرفراوان لە پراکتیکی کلینیکیدا یەکخراوە چونکە ئامرازێکی وردی دەستنیشانکردنە بۆ هەڵسەنگاندنی شێوازەکانی جوولەی سورێنچک.

ئامانج: هەڵسەنگاندنی توانای دەستنیشانکردنی HRM لە پۆلێنکردنی تێکچوونی جوولەی سورێنچک بە بەکارهێنانی پۆلێنکردنی شیکاگۆ v3.0

نەخۆش و شێوازەکان: توێژینەوەیەکی وەسفکەری پاشگەزبوونەوەی لەسەر ١٠٠ نەخۆشی پێگەیشتوو ئەنجامدراوە کە تاقیکردنەوەی پەستانپێوانی سورێنچکیان لە یەکەی ئەندۆسکۆپی سەنتەری نەخۆشیەکانی هەرس و جگەری نەخۆشخانەی فێرکاری ئازادی لە شاری دۆهوک ئەنجامدراوە. توێژینەوەکە لە مانگی یەکەمی ٢٠٢١ تا ئازاری ٢٠٢٢ بە پێداچوونەوە بە پەستانپێوانی سورێنچکی ئەم نەخۆشانە بە بەکارهێنانی پۆلێنکردنی شیکاگۆ v3.0 ئەنجامدراوە. نیشانەکانی سورێنچک کە تۆمارکراون پەیوەندییان بەو ئەنجامانە هەبووە کە لە کاتی تاقیکردنەوەی HREM بەدەست هاتوون.

دەرەنجامەکان: مامناوەندی تەمەنی بەشداربووان 44.8 ساڵ بووە لەگەڵ لادانێکی ستاندارد 16 ساڵ. مێینەکان بە تێکڕا تەمەنیان لە نێرەکان زیاتر بووە و تێکڕای تەمەنیان ٤٧.٨ ساڵ بووە لە کاتێکدا بۆ نێرەکان ٤١.٢ ساڵ بووە. زیاتر لە نیوەی نەخۆشەکان (53%) ناڕێکی خواردنیان هەبووە وەک نیشانەی سەرەکی کە بە HRM چارەسەر کراون. هەستکردنی تۆپ دووەم باو بوو (14%) و دواتر نەخۆشی گەڕانەوەی گەدە و سورێنچک .(13%) (GERD) بەرهەمهێنانی HRM نائاسایی بوو (77%) وەک تێکچوونی جوولەی سورێنچک. ئەو نەخۆشانەی کە تووشی ناڕێکی خواردن بوون، ئاکالازیای جۆری دووەمیان وەک بەرزترین فرێکوێنسی (28.3%) هەبووە، لە کاتێکدا هیچ کام لەو نەخۆشانەی کە گەڕانەوەی سورێنچک، هەستی گۆشەیی، یان سکچوون و ڕشانەوەیان هەبووە بە HRM دەستنیشان نەکراون. باوترین دەرئەنجام بۆ نەخۆشانی تووشبوو بە GERD گیرانی دەرچوونی گەدە و سورێنچک بوو (38.5%). زیاتر لە نیوەی (57.1%)ی ئەو نەخۆشانەی کە هەستی گۆشەییان هەبووە، پشکنینی ئاسایی HRM یان هەبووە. کرژبوونی سورێنچکی دوور دەرکەوتووە کە باوترین دۆزینەوە لە نێوان ئەو نەخۆشانەدا کە ئازاری سنگیان هەیە کە نادڵ دروستکەر بووە.

دەرەنجام: بەهای دەستنیشانکردنی ڕوونی HRM لە پۆلێنکردنی ناجوولاوی سورێنچکدا هەیە کاتێک پۆلێنکردنی شیکاگۆ v3.0 بەکاردەهێنرێت لەو نەخۆشانەی کە نیشانەکانیان ئاماژە بە تێکچوونی جوولە دەکەن.

الخلاصة

العائد التشخيصي لقياس الضغط عالي الدقة لدى المرضى الذين يعانون من اضطرابات حركية المريء

الخلفية: إن التقدم في قياس ضغط المريء عالي الدقة (HREM) قد قلب التقييم السريري لاضطرابات حركية المريء. وقد تم دمجها على نطاق واسع في الممارسة السريرية لأنها أداة تشخيصية دقيقة لتقييم أنماط حركية المريء.

الهدف: تقييم القدرة التشخيصية لإدارة الموارد البشرية في تصنيف اضطراب حركية المريء باستخدام تصنيف شيكاغو v3.0

المرضى والطرق: دراسة وصفية بأثر رجعي أجريت على 100 مريض بالغ خضعوا لاختبار قياس ضغط المريء في وحدة التنظير في مركز أمراض الجهاز الهضمي والكبد في مستشفى آزادي التعليمي في مدينة دهوك. أجريت الدراسة في الفترة من يناير 2021 إلى مارس 2022 من خلال مراجعة قياس ضغط المريء عالي الدقة لهؤلاء المرضى باستخدام تصنيف شيكاغو v3.0. وارتبطت أعراض المريء المسجلة بالنتائج التي تم الحصول عليها خلال اختبار HREM.

النتائج: كان متوسط عمر المشاركين 44.8 سنة مع انحراف معياري قدره 16 سنة. وكانت الإناث في المتوسط أكبر سنا من الذكور بمتوسط عمر 47.8 سنة مقابل 41.2 سنة للذكور. كان أكثر من نصف المرضى (53٪) يعانون من عسر البلع باعتباره العرض الرئيسي الذي تم علاجه بإدارة الموارد البشرية. كان الإحساس بالكرة هو الثاني (14%) يليه مرض الجزر المعدي المريئي (GERD) (13%). وجد أن إنتاجية إدارة الموارد البشرية غير طبيعية (77٪) مثل اضطرابات حركية المريء. كان هؤلاء المرضى الذين يعانون من عسر البلع يعانون من تعذر الارتخاء من النوع الثاني كأعلى تردد (28.3٪)، في حين لم يتم اكتشاف أي مريض من أولئك الذين يعانون من ارتجاع المريء أو الإحساس الكروي أو الغثيان والقيء من خلال إدارة الموارد البشرية. وكانت النتيجة الأكثر شيوعًا لمرضى ارتجاع المريء هي انسداد تدفق المريء المعدي (38.5٪). أكثر من نصف (57.1٪) من المرضى الذين يعانون من الإحساس الكروي كان لديهم اختبار إدارة الموارد البشرية طبيعي. تم العثور على تشنج المريء البعيد ليكون النتيجة الأكثر شيوعا بين المرضى الذين يعانون من آلام في الصدر غير القلبية.

الاستنتاج: هناك قيمة تشخيصية واضحة لإدارة الموارد البشرية في تصنيف خلل الحركة المريئي عند تطبيق تصنيف شيكاغو v3.0 في هؤلاء المرضى الذين يعانون من أعراض موحية لاضطرابات الحركة.