HELICOBACTER PYLORI POSITIVITY AND UPPER GIS ENDOSCOPY RESULTS: IMPLICATIONS FOR CLINICAL PRACTICE

HELİCOBACTER PYLORİ POZİTİFLİĞİ VE ÜST GİS ENDOSKOPİSİ SONUÇLARI: KLİNİK UYGULAMALARA YANSIMALAR

Hamdi Burak PİYADE[1], Ersan GÜRSOY[2]

ABSTRACT

Objective: Our study aimed to present the results of upper GIS (Gastrointestinal System) endoscopy and pathology performed in our clinic last year and the patients' benefit from the treatment.
Materials and methods: This retrospective study analyzed the records of patients who presented to a hospital's general surgery outpatient clinic between January and December 2022 and underwent upper GIS endoscopy. Two hundred and twelve individuals who underwent upper GIS endoscopy by the same surgeon were included for standardization purposes. Variables include age, gender, current complaint, current treatment, presence of barret oesophagus, oesophagal dysplasia, gastric dysplasia, sphincter defects, presence of Helicobacter Pylori, pathology results, treatments started after endoscopy, and whether the treatment benefited were examined.
Results: The mean age of the participants was 50.83± 15.5. 63.2% (n=134) were women. The most common endoscopy finding in the participants was chronic gastritis, with 67.9% (n=144). Helicobacter pylori was positive in 65.6% (n=139). Of those not found to have Helicobacter pylori and benefited from the treatment, 62.7% (n=42) were taking combined therapy, and 37.3% (n=25) were taking PPI+antacids.
Conclusion: Upper GIS endoscopy is a valuable procedure that has an essential place in general surgery practice. Because of both its diagnostic and therapeutic properties, every surgeon should improve himself in this regard. In addition, a competent surgeon should add his clinical knowledge and foresight to the diagnosis and treatment processes, regardless of pathology results or blood tests.
Keywords: Surgical endoscopy, Upper gastrointestinal tract, Helicobacter infections

ÖZET

Amaç: Çalışmamızda kliniğimizde son bir yılda yapılan üst GIS (Gastrointestinal Sistem) endoskopisi ve patoloji sonuçları ve hastaların tedaviden fayda görme durumlarını sunmak amaçlanmıştır.
Materyal ve metot: Bu retrospektif çalışma, bir hastanenin genel cerrahi polikliniğine Ocak-Aralık 2022 tarihleri arasında başvuran ve üst GİS endoskopisi yapılan hastaların kayıtlarını incelemiştir. Standartizasyon açısından aynı cerrah tarafından üst GİS endoskopisi yapılan 212 kişi dahil edilmiştir. Hastaların yaş, cinsiyet, mevcut şikayet, mevcut aldığı tedavi, barret ösafagus varlığı, ösafagus displazisi, mide displazisi, sfinkter kusurları, Helicobacter pylori varlığı, patoloji sonuçları, endoskopi sonrası başlanan tedaviler ve tedaviden fayda görülüp görülmediği gibi değişkenler incelenmiştir.
Bulgular: Katılımcıların ortalama yaşları 50,83±15,5 idi. %63,2'si (n=134) kadındı. Katılımcılarda en sık görülen endoskopi bulgusu %67,9 (n=144) ile kronik gastrit idi. %65,6'sında (n=139) Helicobacter pylori pozitif idi. Helicobacter pylori saptanmayıp tedaviden fayda görenlerin %62,7'si (n=42) kombine tedavi, %37,3'ü ise (n=25) PPİ+ antiasit almaktaydı.
Sonuç: Üst GİS endoskopisi genel cerrahi pratiğinde önemli bir yer tutan değerli bir işlemdir. Hem tanısal hem de tedavi edici özellikleri nedeniyle her cerrah bu konuda kendini geliştirmelidir. Ayrıca bu konuda kendini yetkin hisseden bir cerrah sadece patoloji sonuçlarına veya kan tetkiklerine bağlı kalmaksızın tanı ve tedavi süreçlerine kendi klinik bilgi ve öngörüsünü de katmalıdır.
Anahtar sözcükler: Cerrahi endoskopi, Üst gastrointestinal sistem, Helicobacter enfeksiyonları

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[1]Gümüşhane Devlet Hastanesi Genel Cerrahi Kliniği, Gümüşhane

[2]Erzincan Binali Yıldırım Üniversitesi Tıp Fakültesi, Aile Hekimliği Ana bilim Dalı, Erzincan
*ersangursoy@gmail.com
**Corresponding Author*

Introduction

Upper gastrointestinal tract (GIS) endoscopy is a medical procedure to view the upper gastrointestinal tract's stomach, oesophagus, and other organs. Endoscopy is a widely used tool in diagnosing and treating mucosal anomalies and is very important for general surgery (1, 2). Endoscopic procedures have made significant progress in recent years, and upper GIS endoscopy is used as a first-line method in diagnosing and treating digestive system diseases (3). This procedure is beneficial in diagnosing gastritis, ulcers, reflux disease, polyps, cancer and many other upper gastrointestinal diseases. In addition, endoscopic biopsy procedures also provide tissue samples taken for pathological examination (3). Although pathology results complement upper GIS endoscopy, clinical examination and endoscopic findings may be more important for clinical management (4). Clinical examination and endoscopic findings may be more important for clinical management than pathology results (5). The clinician can directly observe the extent and location of the mucosal anomaly during the endoscopic examination, which is critical for a more accurate diagnosis and treatment planning (6). The primary objective of our study is to examine the impact of Helicobacter pylori positivity on clinical outcomes and response to treatment, in addition to analyzing the results of upper GIS endoscopy and pathology. This research aims to provide significant insights into the prevalence of Helicobacter pylori infection and its role in diagnosing and managing associated upper gastrointestinal diseases, thereby contributing valuable information to clinical practice.

Materıal and methods

Design

Our study is cross-sectional and descriptive.

Ethics Committee Approval

Ethics committee approval was obtained for the study from the local clinical research ethics committee with decision no 2023-07/2, and the principles of the Helsinki Declaration were complied with in its revised version at every stage of the study. Official written permission for the study was also obtained from the state hospital where the study was conducted.

Participants

Patients who applied to the general surgery outpatient clinic of a hospital between January and December 2022 and underwent upper GIS endoscopy by the same surgeon for standardization were included retrospectively. Patients aged 18 years and older who had previously received drug therapy but did not benefit, who underwent diagnostic endoscopy and whose data were not deficient were included in the study. All upper GIS endoscopies performed within the last year that met the inclusion criteria without going to the sample calculation were included (212 individuals).

Data

Variables include age, gender, current complaint, current treatment, presence of barret oesophagus, oesophagal dysplasia, gastric dysplasia, sphincter defects, presence of Helicobacter pylori, pathology results, treatments started after endoscopy, and whether the treatment benefited were examined. Relevant data were obtained from the hospital information management system. Data that could reveal the identity of the participants, such as names and private information, were never used. All of the parameters used in the study are routinely performed in upper gastrointestinal endoscopy, and no extra analysis was requested.

Treatment

The combined treatment used in this study is a standard triple therapy regimen aimed at eradicating Helicobacter pylori infection. Our combined treatment regimen includes a proton pump inhibitor taken twice daily, 1000 mg of amoxicillin taken twice daily, and 500 mg of clarithromycin taken twice daily. These medications are administered for 14 days to combat Helicobacter pylori effectively and alleviate associated gastrointestinal symptoms.

Statistics

The researchers recorded Study data and analyzed it using the SPSS 18 package program (SPSS Statistics for Windows, version 18, SPSS Inc., Chicago, Ill., USA). Descriptive statistical methods were employed to summarize the central tendencies, dispersion, and shape of the dataset's distribution to understand the dataset comprehensively.

of the results, categorical variables were expressed as frequencies and percentages (n, %), while continuous variables were summarized using means and standard deviations (mean± SD). Furthermore, the chi-square test of independence was applied to examine the association between categorical variables and test the hypotheses formulated in this research. The statistical significance level was taken as $p<0.05$.

Results

Two hundred and twelve people were included in the study. The mean age of the participants was 50.83±15.5. The gender, current complaints and drug treatments of the participants are listed in Table 1.

Table 1. Demographic data of the participants and drug treatments they received

		n	%
Gender	Woman	134	63.2
	Male	78	36.8
Complaint	Reflux	55	25.9
	Occult blood in stool	13	6.1
	Stomachache	116	54.7
	Anaemia	11	5.2
	Dyspepsia	17	8.1
Previous drug therapy	Not received	55	25.9
	PPI	52	24.5
	PPI+ antacid	105	49.6
Treatment after the procedure	Not received	3	1.4
	Combined treatment	167	78.8
	PPI+ antacid	42	19.8

The most common endoscopy finding in the participants was chronic gastritis, with 67.9% (n=144). While malignancy was detected in 3.3% (n=7) of the patients, helicobacter pylori was positive in 65.6% (n=139). (Table 2).

Table 2. Endoscopy findings of participants

		n	%
Barrett's esophagus	Yes	71	33.5
	No	141	66.5
Esophagocardiac sphincter defect	Insufficiency	57	26.9
	No	152	71.7
Hiatal hernia	Grade 1*	42	19.8
	No	170	80.2
Ulcer	Yes	6	2,8
	No	206	97.2
Bile reflux	Where	132	62.3
	No	80	37.7
Pylor	Normal	207	97.6
	Hypertrophic	5	2.4
Pathology	Chronic gastritis	144	67.9
	Active gastritis	61	28.8
	Malignancy	7	3.3
Helicobacter pylori	Positive	139	65.6
	Negative	73	34.4

*Grade I (sliding hiatal hernia): Involves the upward displacement of the stomach into the mediastinum through the esophageal hiatus, primarily affecting the gastroesophageal junction and not involving other abdominal organs as in more severe types.

In the group of 73 individuals who initiated treatment despite testing negative for Helicobacter pylori, a significant portion experienced positive outcomes. Specifically, 62.7% (n=42) of these patients who did not test positive for Helicobacter pylori but still saw improvement were on a combined therapy regimen. The remaining 37.3% (n=25) benefited from a treatment plan that included Proton Pump Inhibitors (PPIs) and antacids. This differentiation in treatment efficacy underscores the complexity of managing symptoms without Helicobacter pylori infection and highlights the need for a tailored approach to gastrointestinal care (Table 3).

Table 3. Helicobacter pylori detection in participants and their benefit from treatment

		Helicobacter pylori		
		No	Yes	**p**
Response to treatment	No	6 (%28.5)	15 (%71.5)	**0.541***
	Yes	67 (%35.2)	123 (%64.8)	
Sum		73 (%34.5)	138 (%65.5)	

* Chi Square Test

Discussion

In this study, we examined the relationship between the results of endoscopy and pathology and their benefit from treatment in patients who underwent upper GIS endoscopy due to dyspeptic complaints. Our findings revealed that most upper GIS endoscopy patients had H. pylori infection and chronic gastritis. The number of patients diagnosed with gastric cancer was minimal, and these were primarily patients with alarm symptoms. Another important finding of our study is that approximately two-thirds of the 73 participants without helicobacter pylori benefited from the combined treatment.

Upper GIS endoscopy is a medical procedure used to view organs of the upper digestive system, such as the oesophagus, stomach, and duodenum(7). Upper GIS endoscopy is a widely used tool in diagnosing and treating mucosal anomalies and is very important for general surgery(7). It contributes to the correct diagnosis and treatment planning by showing the anatomical and pathological condition of the upper digestive system. In addition, in some cases, it replaces surgical operation and offers a less invasive and more effective treatment. Knowledge of upper GIS endoscopy is essential for the professional development of general surgeons(8).

There are some indications for performing upper GIS endoscopy. These include alarm symptoms (dysphagia, vomiting, gastrointestinal bleeding, anaemia, loss of appetite and weight loss), dyspeptic patients over 50, and peptic ulcer patients with or without H. pylori infection, GER patients, and patients at high risk of gastric cancer(9). Upper GIS endoscopy can be not only a diagnostic procedure but also a therapeutic one. Interventions such as stopping bleeding, removing polyps or tumours, and removing stenosis or foreign bodies can be done with endoscopic procedures(10). In this way, the need for a surgical operation on the patients is reduced or eliminated. Endoscopic procedures are generally less invasive, have fewer complications, and are shorter in duration, facilitating patients' recovery process. Patients who had previously received drug therapy but did not benefit were included in our study.

Stomach pain and reflux are common complaints requiring upper GIS endoscopy(11). These complaints can be symptoms of diseases such as gastritis, ulcers, reflux disease, polyps, and cancer in the upper digestive system. In our study, the most common complaints were stomach pain and reflux. Abdominal pain or reflux may be early signs of gastric carcinoma(12). For this reason, it would be the right approach to perform endoscopy on these patients without wasting time.

The most common pathology finding was chronic gastritis, with 67.9%. These findings are consistent with the literature(13, 14). Although benign causes are detected in most patients, it would be appropriate to plan endoscopy for patients with stomach pain unresponsive to all treatments to avoid the precursor lesions.

Although no statistically significant relationship was found, helicobacter pylori was not detected in 34.5% (n=73) of the patients who started empirical treatment without waiting for the pathology result. However, the majority of these patients benefited from the treatment. 62.7% (n=42) of those who did not find Helicobacter pylori and benefited from the treatment received combined treatment.

In some cases, it may be appropriate to start treatment empirically without waiting for a helicobacter result(15). For example, delaying treatment may be harmful in patients with severe ulcer bleeding or at high risk of gastric cancer. However, in some cases, it is better to wait for the helicobacter result. For example, in patients with mild or atypical complaints or who have previously used antibiotics, empirical therapy may fail or lead to the development of resistance. Therefore, it is at the physician's discretion to start treatment empirically without waiting for the helicobacter result(15).

The physician's decision is more critical when the pathology result is inconsistent with the physician's decision. The physician is the person who knows the patient's clinical condition, risk factors, treatment options, and prognosis best. The pathology result is based only on a microscopic examination of the biopsy area. It may need to be more accurate due to heterogeneity of the tumour, sampling error or difficulty in interpretation. Therefore, when there is a conflict between the pathology result and the physician's decision, the physician's clinical judgment should prevail(16).

The most important limitation of our study is that it only included the results of a specific region. Therefore, the study's results cannot be generalized to the population. Nevertheless, sample diversity was ensured by including all patients who underwent endoscopy in the study. Another limitation is the limited data obtained due to the study's retrospective nature; family history, duration of complaints, degree of complaints, etc., data could not be questioned. It would be appropriate to conduct prospective studies in larger populations in the future. Despite all these limitations, the study's strengths are the inclusion of patients over a long period and the inclusion of only procedures performed by the same practitioner in terms of standardization.

Conclusion

In conclusion, the surgeon's expertise plays a significant role in managing upper gastrointestinal system diseases; however, particularly in cases involving severe conditions such as malignancies, treatment decisions should be based on comprehensive pathological examination and, if necessary, the outcomes of multidisciplinary consultations. This approach optimizes patient-specific treatment planning and provides the holistic assessment required to achieve the best clinical outcomes.

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Conflict of interest

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