

Results of upper gastrointestinal endoscopy conducted at a state hospital

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ABSTRACT

Introduction: This study aimed to analyze upper gastrointestinal system endoscopic examination findings from September 2021 to July 2022 at a state hospital.

Materials and Methods: Sedated endoscopic examinations were conducted in the general surgical endoscopy unit, with retrospective evaluation of findings.

Results: Among the patients, 272 (61.1%) were male and 173 (38.9%) were female. Common diagnoses included Duodenal ulcer (16.9%), Esophagitis (16.2%), Pangastritis (12.6%), Alkaline reflux (11.5%), Hiatal hernia (11.0%), Gastric polyp (7.6%), Gastric cancer (7.4%), Antral gastritis (6.5%), Gastric ulcer (6.1%), and Pyloric stenosis (2.5%).

Conclusion: Esophagogastroduodenoscopy, a well-tolerated diagnostic procedure under sedation with minimal complications, is increasingly important in smaller, resource-limited hospitals. Its widespread use by healthcare professionals in such settings is crucial for diagnosing and treating patients.

Keywords: Endoscopy, Upper gastrointestinal system, Stomach

Introduction

Endoscopy plays a crucial role in the diagnosis and treatment of complex pathologies and has emerged as a preferred method for managing many diseases.^[1] The advancement of endoscopic procedures has enhanced the feasibility of diagnostic and therapeutic interventions, establishing endoscopy as the primary modality for diagnosing and treating a wide range of diseases.^[2]

The introduction of fiberoptic endoscopes for upper gastrointestinal system endoscopy in the late 1950s marked a significant milestone. This innovation provided the

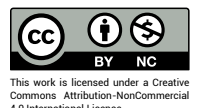
first opportunity for direct visualization of the esophagus, stomach, and duodenum in a live setting. Initially, patients undergoing this procedure often presented with severe symptoms such as bleeding, obstruction, and pain, frequently associated with cancer.^[3] Since the mid-1990s, technological advancements have significantly increased the safety and prevalence of its use.

Upper gastrointestinal system endoscopy can be performed by both gastroenterologists and general surgeons. The increasing incidence of malignancies, the rise in *Helicobacter Pylori* prevalence, and the evolution of more fre-



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quent and widespread screening programs in our country have led to a heightened demand for endoscopy.^[4]

This study aims to evaluate the endoscopic and pathological diagnoses of cases undergoing upper gastrointestinal system endoscopy and biopsy at the surgical endoscopy unit of a state hospital in Van.

Materials and Methods

This study included cases that underwent upper gastrointestinal system endoscopy and biopsy at the surgical endoscopy unit of a state hospital from September 2021 to July 2022. We retrospectively reviewed the age, gender, complaints, endoscopic diagnoses, and results of pathological evaluations of these cases, using the hospital information system records. All upper gastrointestinal system endoscopy procedures in this unit were performed by a single surgeon with extensive endoscopic experience. These procedures were conducted after an eight-hour fasting period and under sedation analgesia.

Statistical Analysis

For the statistical analysis of the data, we used the Statistical Package for the Social Sciences (SPSS) version 25.0. Categorical measurements were summarized as numbers and percentages. Continuous measurements were presented as mean and standard deviation, and where necessary, median and minimum-maximum values were also included. The chi-square test was applied to compare categorical variables. The Shapiro-Wilk test was utilized to assess whether the parameters in the study followed a normal distribution. For parameters that did not follow a normal distribution, the Mann-Whitney U test was employed. A significance level of 0.05 was set for all tests.

Results

The study encompassed patients aged between 31 and 94 years, with an average age of 62.9 ± 11.7 years. Among these patients, 272 (61.1%) were male, and 173 (38.9%) were female. The most common diagnostic findings were as follows: Duodenal ulcer in 75 patients (16.9%), Esophagitis in 73 patients (16.2%), Pangastritis in 56 patients (12.6%), Alkaline reflux in 51 patients (11.5%), Hiatal hernia in 49 patients (11.0%), Gastric polyp in 34 patients (7.6%), Gastric cancer in 33 patients (7.4%), Antral gastritis in 29 patients (6.5%), Gastric ulcer in 27 patients (6.1%), and Pyloric stenosis in 11 patients (2.5%).

Discussion

Endoscopic examination has become an effective method for evaluating symptoms of the upper gastrointestinal system (GIS).^[5] This approach not only aids in identifying the causes of gastrointestinal symptoms^[6] but also serves therapeutic purposes. These include controlling variceal and non-variceal bleeding, dilating strictures, removing foreign bodies, palliating advanced malignancies with stent placement or tumor ablation, and inserting percutaneous gastrostomy tubes.^[7]

Peptic ulcer disease is a significant public health concern. In Western societies, its point prevalence ranges between 1.5-2.5%, and it is expected to be higher in low socioeconomic communities.^[8] A study in the Netherlands found gastric ulcers at a rate of 1.8% and duodenal ulcers at 2.1%,^[9] while a study in Cuba reported 15.8% for duodenal ulcers and 6.2% for gastric ulcers.^[10] Our study showed rates of 16.9% for duodenal ulcers and 6.1% for gastric ulcers, aligning with the literature from a socioeconomic perspective.

Endoscopic esophagitis is detected in 30-70% of symptomatic cases. A survey in our country reported that 3.1% of participants experienced continuous, 22.6% frequent, and 46.3% occasional reflux symptoms.^[11] Ayar Y. and colleagues, in a study conducted in Bayburt, reported esophagitis in 8% of cases undergoing upper gastrointestinal endoscopy.^[12] Mungan and colleagues, in a 1999 study involving 585 participants from Istanbul, Erzurum, Diyarbakir, and Malatya, stated that 3.1% had continuous, 22.6% frequent, and 43.6% occasional pyrosis and/or regurgitation.^[6] In our study, esophagitis was detected in 16.2% of cases.^[7] Although our study was conducted in a similar geographic area, our finding is somewhat higher, suggesting regional variations or differences in study methodologies.

The prevalence of gastritis varies significantly across different regions and studies. In a study by Galban et al. in Cuba, gastritis prevalence was found to be 91.6%.^[10] At Zonguldak Karaelmas University in our country, gastritis was detected in 78% of cases,^[13] while at Osmangazi University, the rate was 23%.^[14] In the Diyarbakir region, the prevalence was 13%.^[15] In our study, we encountered pangastritis in 12.6% and antral gastritis in 6.5% of cases. Although these rates are lower compared to some literature, they align with expectations when considering regional dietary habits and geography.

Alkaline reflux gastritis incidence varies, with estimates ranging from 5% to 35% in patients who have undergone operations affecting pyloric sphincter functions. Other authors have estimated a 3% incidence in patients post-gastrectomy.^[16] In Erzurum, alkaline reflux gastritis was found in 8.2% of 106 cases.^[17] In Adapazari Akyazi, the incidence was 7% in women and 8.5% in men for alkaline antral gastritis, and 3.5% in women and 2.8% in men for alkaline pangastritis.^[18] In our study, alkaline reflux gastritis was observed in 11.4% of male patients and 11.6% of female patients, totaling an 11% incidence, with none having a history of gastric surgery.

The detection of gastric and duodenal polyps has increased with the widespread use of upper endoscopy, identified in 6% and 4.6% of patient examinations, respectively.^[19] These polyps can be either neoplastic or non-neoplastic. In our study, gastric polyps were detected in 7.6% of cases, and duodenal polyps in 1.1%.

Regarding esophageal and gastric cancers; in our country, the incidence was 0.33% for esophageal cancer and 1.75% for gastric cancer in endoscopy patients.^[20] In Erzurum, gastric cancer was detected at a rate of 6.5% and esophageal cancer at 3.1%,^[17] while in Diyarbakir, the rates were 2.1% for gastric cancer and 0.38% for esophageal cancer.^[15] In our research, gastric cancer was observed at a rate of 7.4%, and esophageal cancer at 0.2%. The high incidence of stomach cancer in our region is likely linked to dietary habits, while the low incidence of esophageal cancer could be attributed to the study's short duration and the limited number of cases. A study in the Netherlands found a 1.3% incidence of esophageal cancer.^[21]

In conclusion, esophagogastroduodenoscopy (EGD) is a well-tolerated diagnostic procedure when performed under sedation, presenting minimal complications. The widespread implementation of endoscopic procedures, particularly in smaller and remote hospitals with limited resources, is crucial. This approach enables healthcare professionals to play a significant role in the timely diagnosis and effective treatment of patients with various gastrointestinal conditions. The accessibility and reliability of EGD make it an invaluable tool in both urban and rural healthcare settings, contributing to improved patient outcomes and the efficient management of gastrointestinal diseases.

Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

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