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A Surgeon's Endoscopy Experience

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ABSTRACT:
Purpose: It was aimed to convey the experiences of endoscopy performed by a single surgeon in a district hospital.
Material and Methods: We retrospectively evaluated 784 patients who underwent endoscopic procedures by the same surgeon between February 2015 and February 2018 in the general surgery endoscopy unit of a state hospital.
Results: Endoscopy (upper GIS endoscopy) was performed in 585 of 784 cases included in the study, and colonoscopy (lower GIS endoscopy) was performed in 199 of them. Of the patients who underwent endoscopy, 407 were female patients. The mean age was 37.2. There were 178 male patients, and the mean age was 50.3. 100 of the patients who underwent colonoscopy were female, and the mean age was 54.1. There were 99 male patients, and the mean age was 54.1 years.
Conclusion: Bringing endoscopy and colonoscopy to the medical world is a groundbreaking change in health. These processes are special processes and the necessary care and sensitivity should be shown at the highest level. With correct evaluation and correct treatment protocols, very successful results can be obtained in endoscopically detected pathologies.
Keywords: *Endoscopy, Colonoscopy, Rectoscopy, Rectosigmoidoscopy*

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INTRODUCTION

Stomach and intestinal problems are clinical pathologies that we hear quite commonly in our current life. This subject includes a wide spectrum of benign gastritis, dyspeptic complaints, gas problems, irritable bowel syndromes, as well as stomach and bowel cancers. Evaluation of these diseases starts with the history and physical examination. A good observation is sufficient for the diagnosis of most diseases. Unfortunately, further investigations are required for a more complicated or more severe clinical condition. At this stage, endoscopic procedures, which can be considered the most effective and accepted as the gold standard, have a very active role in illuminating the clinic of the disease. Upper and lower GI endoscopy procedures have developed significantly since their first use. It has made real positive changes in the field of health. With the visualization of the gastrointestinal tract, the etiology of dyspeptic complaints could be investigated and the way for medical innovations was paved. According to the Global Cancer Monitoring (GLOBOCAN) data of the International Agency for Research on Cancer, in 2018, while the frequency of colon cancer was third among other cancer types in developed countries, it was the second in terms of mortality (GLOBOCAN, 2018). 7.6 million deaths occur annually due to cancer. 736 thousand of these deaths are due to stomach cancer (WHO, 2012). Great progress has been made in the early diagnosis and treatment of GIS malignancies. Endoscopic procedures are safely performed by general surgeons and gastroenterology specialists in our country. In our study, we tried to explain the

endoscopy experiences we had in the newly established endoscopy unit in a district hospital.

MATERIAL and METHODS

This study was approved by the Kırşehir Ahi Evran University, Faculty of Medicine, Clinical Research Ethics Committee on 29.01.2019 with the decision number 2019-02/27. All 784 cases who underwent endoscopy between February 2015 and February 2018 in the Alaca district of Çorum were evaluated retrospectively. The procedure was performed in the newly established endoscopy unit. With its independent structure, the unit was designed in a separate room in the operating room in accordance with all kinds of interventional procedures. A nurse and staff member accompanied the procedure at all times for the endoscopy. In addition, the anesthesia team was available to intervene when necessary. If necessary for colonoscopy and endoscopy, midazolam (Demizolam, Dem İlaç San. Tic. Ltd. Şti. Greece) was used for sedation. Lidocaine Hcl spray (Xylocain, Astra Zeneca, UK) was used for throat anesthesia. For the procedure, the patients were dressed appropriately for endoscopy and colonoscopy. Consent for the endoscopic procedure and anesthesia was obtained from all patients. All procedures were performed by the same surgeon. During his general surgery training, the surgeon also learned endoscopic interventions as part of the core training curriculum. An 8-hour fasting was deemed sufficient for the endoscopy procedure. For colonoscopy, a 2-day diet and bowel cleansing with laxative drugs were performed on the last night. Elderly patients with chronic diseases (diabetes mellitus, hypertension and cardiac pathologies) were hospitalized and prepared for colonoscopy. Only enema was applied to the patients who underwent rectosigmoidoscopy.

Purpose and Type of the Study

This study was prepared retrospectively by performing data analysis. We aimed to show how effective endoscopy and colonoscopy can be in diagnosis and treatment if done meticulously.

Sampling and participant

All 784 cases who underwent endoscopy between February 2015 and February 2018 in the Alaca district of Çorum were evaluated.

Data Collection Tools

The patient data used in the study were obtained from the hospital's data processing center records.

Statistical Analysis

Data analyzes were processed on the percentile system.

Ethical Approval

This study was approved by the Kırşehir Ahi Evran University, Faculty of Medicine, Clinical Research Ethics Committee on 29.01.2019 with the decision number 2019-02/27.

RESULTS

Upper GIS endoscopy (endoscopy) was performed in 585 of 784 cases included in the study, and lower GIS endoscopy (colonoscopy and rectosigmoidoscopy) was performed in 199 cases. The mean age of the patients who underwent endoscopy was 41.1 years. Of the patients who underwent endoscopy, 407 were female patients. The mean age was 37.2. There were 178 male patients, and the mean age was 50.3. The mean age of the patients who underwent colonoscopy was 54.1 years. 100 of the patients who underwent colonoscopy were female, and the mean age was 54.1. There were 99 male patients, and the mean age was 54.1 years. In the upper GIS examination, gastritis was detected in 403 (68.88%) of 585 patients. Esophagitis was observed in 128 (21%) patients and bile reflux was observed in 203 (34%) patients (Table 1).

According to the results of the histopathological examinations evaluated retrospectively, helicobacter pylorii (HP) positivity was detected in 304 (51.96%) patients, intestinal metaplasia considered premalignant (Leung & Sung, 2002) in 62 (10.5%) patients, and gastric cancer in 3 (0.5%) patients was done (Table 2). All gastric cancers were reported as adenocarcinoma.

Colonoscopy was performed in patients with chronic constipation, rectal hemorrhage, changes in bowel habits or weight loss.

Table 1. Patient distribution of endoscopy imaging results

Variables	Gastritis	Esophagitis	Bile Reflux	Total
Gastritis	143	80	180	403
Esophagitis	80	46	2	128
Bile Reflux	180	2	21	203
Total	403	128	203	734

Table 2. Patient distribution of endoscopy histopathology results

Variables	H. Pylori	I. Metaplasia	Stomach Cancer	Total
H. Pylori	250	54	-	304
I. Metaplasia	54	8	-	62
Stomach Cancer	-	-	3	3
Total	304	62	3	369

In the colonoscopy procedure performed in 199 patients, normal colonoscopy findings were observed in 98 (49.2%) patients.Twenty sessile polyps and 14 pedicled polyps were found in 34 (17%) patients. Twelve of the sessile polyps were excised. Samples were taken with biopsy forceps from polyps that could not be excised. All 14 pedicled polyps were excised. A total of 68 of our patients who underwent colonoscopy were biopsied. Of these, 34 were patients with polyps. The pathology result was low grade dysplasia in 2 of these patients, tubular adenoma in 16, tubulovillous adenoma in 1, and villous adenoma in 3 patients. The results of 12 patients resulted as normal mucosa. Ulcerovegetan mass was observed in 9 of the patients who underwent colonoscopy. The outcome of patients with an ulcerovegetan mass was adenocarcinoma. Colon cancer rate was found to be 5.5% among patients who underwent colonoscopy. The mean age of the patients with cancer was 57 years. No synchronous tumor was observed in cancer cases. Biopsy samples were taken from 24 patients for ulcerations in the form of hyperemia, mucosal irregularity or punctation observed in the intestinal mucosa during colonoscopy. In 4 of them, the pathology result was inflamed and congested colonic mucosa. Results were obtained as nonspecific colitis in 17 of them. The result of our 2 patients was in the form of inflamed colonic mucosa in a regular structure. The result of 1 patient was reported as atypical lymphoid proliferation.

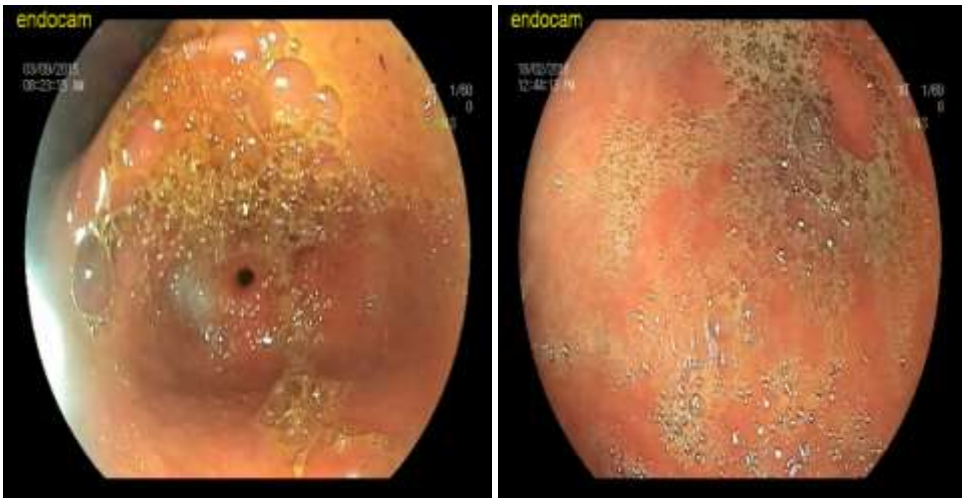

Figure 1. Endoscopy, bile reflux

Figure 2. Colonoscopy, polyp excision

DISCUSSION

The history of endoscopy, which provides the opportunity to perform many interventional procedures such as the evaluation of the gastrointestinal tract, diagnosis and treatment, dates back to Hippocrates. Hippocrates stated that he used a rectal speculum during the examination. Modern endoscopy started with the use of a device he named "Lichtleiter", consisting of a reflective mirror, a double-lumen ventral cannula, and a wax developed by Bozzini in Frankfurt in 1805 (Türk Cerrahi Derneği, 2016). Endoscopy brought groundbreaking innovations for upper GI diseases. Today, in addition to diagnosing stomach-specific common or rare upper GI diseases such as ectopic pancreatic tissue development (Özden et al., 2020); It has many therapeutic uses such as interfering with bleeding, dilatation in ulcerations around the pylorus, and stenting for advanced tumors. As a more advanced stage of endoscopy, ERCP (endoscopic retrograde cholangiopancreaticography) has been used, and biliary tract and pancratic duct imaging procedures can be performed easily. With the ERCP procedure, choledochal stone has moved away from the indication for surgery. It also allowed stent placement for advanced pancreatic and biliary tumors. An example of bile reflux disease diagnosed by endoscopy is given in figure 1. Colonoscopy is the gold standard for lower GIS examination. Diagnosis of lower GIS diseases with colonoscopy, excision of polyps, stopping bleeding, removal of foreign body, decompression for volvulus can be performed. An example of polyp excision in colonoscopy is given in figure 2.

Gastroesophageal reflux disease (GERD) occurs when stomach contents back up into the esophagus. In this case, gastric juice with reflux may also contain foods mixed with acid, pepsin and bile salts. A burning sensation behind the chest may radiate to the back and throat. In addition, it manifests itself with symptoms such as excessive belching, indigestion, prolonged coughing, bitter and sour water in the mouth, bad smells in the mouth, and hoarseness (Yıldız & Kurt, 2010). In studies conducted in China, the prevalence of GERD is between 2.5% and 6.2% (Yıldız & Kurt, 2010; Wong et al., 2003; He et al., 2010; Chen et al., 2005). It was published in Japan with a rate of 16.5% (Miyamoto et al., 2008). In a study in the United States, it was found to be 26.2% (Yuen et al., 2010). In our study, the lower esophageal sphincter was observed to be loose in 264 (45.1%) patients. However, signs of esophagitis were observed in 128 (21%) patients. In a study evaluating the frequency of esophagitis, it was found that esophageal sphincter (LES) looseness increases the incidence of esophagitis. Esophagitis was not observed in all patients with loose esophageal sphincter (Sarıoğlu et al., 2009). Helicobacter pylori (H. pylori) is a microaerophilic and Gram-negative bacterium. It is known as one of the main causes of duodenal ulcer, peptic ulcer

disease, gastric adenocarcinoma, type B gastritis and gastric B-cell lymphoma. The human stomach is considered the main reservoir of H. pylori strains (Hooi et al., 2017). The prevalence of H. pylori is very high in some countries, such as Iran, and epidemiological studies have shown that more than 50% of the human population is affected by H. pylori strains (Ranjbar et al., 2016). In our study, H.pylori positivity was detected in 304 (51.96%) patients as a result of histopathological examinations. It was found to be compatible with the general literature.

Alkaline reflux gastritis is the injury that occurs in the gastric mucosa as a result of the bile, pancreas and small intestine secretions coming back to the stomach (reflux) in the duodenum. The most important factor in the reflux of duodenal contents into the stomach is the deterioration of pyloric functions (Pazzi et al., 1989). In the researches; the presence of bile in the duodenal fluid leaking back into the stomach and esophagus; It has been shown that it causes intestinal metaplasia in the stomach and esophageal cancer in the esophagus (Dixon et al., 2001). In our study, bile reflux was observed in 203 (34%) patients.

Many studies have been conducted for intestinal metaplasia (Leung & Sung, 2002), which is considered a precancerous lesion. Craanen et al. found the incidence of intestinal metaplasia to be 25%. In a study conducted by Adalı et al. in our country, this rate was found to be 20.8% (Craanen et al., 1992; Adalı, Eroğlu & Güvendi, 2017). In our study, this rate was below the literature. When the histopathological examination results of the samples taken were evaluated retrospectively, intestinal metaplasia was positive in 62 (10.5%) patients.

Adenocarcinoma is the most common type of stomach cancer. There are also very rare types such as primary SCC (squamous cell carcinoma) (Karaca, Pekcici, & Ozer, 2011). Gastric cancer is most common in Japan and China. Its annual incidence in Europe is 12-15 per 100,000. According to the World Health Organization report; Cancers are responsible for 7.6 million deaths annually worldwide, and approximately 736 000 of these deaths are due to gastric cancer (WHO, 2012; Wayman, Forman & Griffin, 2001; Terry, Gaudet & Gammon, 2002). In our country, this rate is 9.92 per 100000 (TC Sağlık Bakanlığı, 2012). In a localized study, the rate of gastric cancer among cancers was found to be 7% (Gömeç, & Özden, 2021). In our study, there was a total of 3 patients with gastric cancer. Considering the rate of patients who underwent endoscopy, we can say that it is 0.5%. In our study, this rate is the rate among the patients who underwent endoscopy and does not give an idea about the general population of the district where the study was conducted.

Colonoscopy is important in the early diagnosis of all kinds of pathological formations of the colon and rectum. The American Cancer Society recommends that every individual over the age of 50 should have a stool occult blood test once a year and a rectosigmoidoscopy every 3-5 years (Smith et al., 2003). In a study by Oymacı et al., the number of patients who underwent polyp excision in patients who underwent colonoscopy was reported as 471/1750 (25.9%) (Oymacı et al., 2014). In our study, 34 (17%) polyps were detected in 199 colonoscopy patients. Of these, 20 were sessile polyps and 14 were pedicled polyps. Twelve of the sessile polyps were excised. Samples were taken with biopsy forceps from polyps that could not be excised. All 14 pedicled polyps were excised. Colorectal cancer (CRC) has an important place among cancers affecting both genders. In the United States, CRCs are the third most common cancer and cancer-related deaths in both men and women (Siegel et al., 2014). In our country, according to the data of the Ministry of Health, CRC ranks third among all cancers with 7.8% in women and fourth in men with 7.5% (Terry, Gaudet & Gammon, 2002). In our study, this rate was found to be 5.5%. This rate is the rate among the patients who underwent colonoscopy and does not give an idea about the general population of the district where the study was conducted.

CONCLUSION

Bringing endoscopy and colonoscopy to the medical world is a groundbreaking change in health. Endoscopic procedures are special procedures and the necessary meticulousness should be shown at the most sensitive level. Very successful results can be obtained with the right evaluation and the right

treatment protocols at an early stage. Although the number of patients is relatively low, our study is important in terms of showing that endoscopic and colonoscopic procedures can be performed in a secondary level state hospital by following the diagnosis and treatment guidelines and taking all necessary precautions for patient and employee safety.

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Conflict of Interest

There is no conflict of interest.

REFERENCES

Adalı, Y., Eroğlu, HA., Güvendi, GF. (2017). Endoscopic gastric biopsy results: Kars province; Kafkas J Med Sci, 7(1), 47–52. https://doi.org/10.5505/kjms.2017.70894

Chen, M., Xiong, L., Chen, H. et al. (2005). Prevalence, risk factors and impact of gastroesophageal reflux disease symptoms: a population-based study in South China. Scand J Gastroenterol, 40(7), 759-67. https://dx.doi.org/10.1080/00365520510015610

Craanen, ME., Dekker, W, Blok, P., et al. (1992). Intestinal metaplasia and helicobacter pylori: an endoscopic bioptic study of the gastric antrum. Gut, 33(1), 16-20. https://doi.org/10.1136/gut.33.1.16

Dixon, MF., Neville, PM., Mapstone, NP. et al. (2001). Bilier reflux gastritis and Barrett's oesophagus further evidence of a role for doudenogastro-oesophageal reflux. Gut, 49(3), 359-363. https://doi.org/10.1136/gut.49.3.359

GLOBOCAN. İnternational Agency for Research on Cancer, World Health Organization. Erişim Adresi: http://gco.iarc.fr/ today/online-analysis-pie

Gömeç, M, Özden, H. (2021). Distribution of AB0 and Rh blood groups in cancer patients; is A Rh (+) blood group a risk factor in colorectal cancer development? . Cumhuriyet Medical Journal, 43 (2), 182-188. https://doi.org/10.7197/cmj.950194

He, J., Ma, X., Zhao, Y. et al. (2010). A population-based survey of the epidemiology of symptom-defined gastroesophageal reflux disease: the Systematic Investigation of Gastrointestinal Diseases in China. BMC Gastroenterol, 10: 94. https://dx.doi.org/10.1186/1471-230X-10-94

Hooi, JKY., Lai, WY., Wk, N. et al. (2017). Global prevalence of Helicobacter pylori infection. Gastroenterology, 153(2), 420-429. https://doi.org/10.1053/j.gastro.2017.04.022

Karaca, G., Pekcici, MR., Ozer, H. et al. (2011). Primary squamous cell carcinoma of the stomach in a 68-years-old man. Geriatrics & gerontology international, 11(1), 119-120. https://doi.org/10.1111/j.1447-0594.2010.00642.x

Leung, WK., Sung, JJY. (2002). Review article: intestinal metaplasia and gastric carcinogenesis. Aliment Pharmacol Ther., 16(7), 1209-1216. https://dx.doi.org/10.1046/j.1365-2036.2002.01300.x

Miyamoto, M., Haruma, K., Kuwabara, M. et al. (2008). High incidence of newly-developed gastroesophageal reflux disease in the Japanese community: a 6-year follow-up study. J Gastroenterol Hepatol, 23, 393-397. https://doi.org/10.1111/j.1440-1746.2007.05043.x

Oymacı, E., Sarı, E., Uçar, AD. et al. (2014). Cerrahi endoskopi ünitemizdeki kolonoskopik polipektomi sonuçlarımızın değerlendirilmesi. Kolon Rektum Hast Derg, 24(4), 118-124.

Özden, H., Gömeç, M., Kurtulan, O., Ectopic Pancreas Tissue in the Gallbladder: An Incidental Mass in Laparoscopy. Archives of Iranian Medicine, 23 (11), 761-763. https://dx.doi.org/10.34172/aim.2020.100

Pazzi, P., Scalia, S., Stabellini, G. et al. (1989). Bile reflux gastritis in patients without prior gastric surgery:therapeutic effects of ursodeoxycholic asid. Current Therapeutic Research, 45, 476-487.

Ranjbar, R., Bolkheir, A., Vahdat, K. et al. (2016). The association of Chlamydia pneumonia and *Helicobacter pylori* IgG seropositivity with Omentin-1, visfatin and adiponectin levels in postmenopausal women. Acta Med Iran, 54(12), 771–777.

Sarıoğlu, M., Kabaçam, G., Bektaş, M. et al. (2009). The change in esophagitis detection rates during the last two decades at an endoscopy center. Endoskopi Dergisi, 17(1), 01-05.

Siegel, R., Ma, J., Zou, Z. et al. (2014). Cancer statistics. CA Cancer J Clin, 64(1):9-29. https://doi.org/10.3322/caac.21208

Smith, RA., Cokkinides, V., Eyre, HJ. (2003). American Cancer Society. American Cancer Society guidelines for the early detection of cancer. CA Cancer J Clin, 53(1), 27-43. https://doi.org/10.3322/canjclin.53.1.27

Terry, MB., Gaudet, MM., Gammon, MD. (2002). The epidemiology of gastric cancer. Semin Radiat Oncol, 12(2), 111-127. https://doi.org/10.1053/srao.30814.

TC Sağlık Bakanlığı. (2012) Kanser İstatistikleri. Available from http://www.saglik.gov.tr/TR/belge/1-7179/eski2yeni.html

Türk Cerrahi Derneği. (2016). Gastrointestinal Sistem Endoskopisi. Ankara. BAYT Bilimsel Araştırmalar Basın Yayın ve Tanıtım. ISBN: 978-605-85624-1-7

Wayman, J., Forman, D., Griffin, SM. (2001). Monitoring the changing pattern of esophagogastric cancer: data from a UK regional cancer registry. Cancer Causes Control,12(10), 943-949. https://doi.org/10.1023/A:1013756531219

WHO (World Health Organisation Report, Cancer Fact sheet N°297 http://www.who.int/mediacentre/factsheets/fs297/e

n/ (Date of access 10/10/2012)

Wong, WM., Lai, KC., Lam, KF. et al. (2003). Prevalence, clinical spectrum and health care utilization of gastro-oesophageal reflux disease in a Chinese population: a population-based study. Aliment Pharmacol Ther, 18, 595-604. https://dx.doi.org/10.1046/j.1365-2036.2003.01737.x

Yıldız, S., Kurt, AS. (2010). Çocuklarda Gözardı Edilen Bir Durum: Gastroözofageal Reflü. Hemşirelikte Eğitim ve Araştırma Dergisi, 7 (1), 19-27

Yuen, E., Romney, M., Toner, RW. et al. (2010). Prevalence, knowledge and care patterns for gastro-oesophageal reflux disease in United States minority populations. Aliment Pharmacol Ther, 32: 645-654. https://doi.org/10.1111/j.1365-2036.2010.04396.x