ISSN NO: 2770-2936
Date of Publication:18-03-2022

Diagnostic And Treatment Tactics in Gastroesophageal Reflux Disease

Gulamov Olimjon Mirzakhitovich
MD, DSc, Head of the Department of Thoracoabdominal Oncosurgery, State Institution "Republican Specialized Center of Surgery named after academician V. Vakhidov", Tashkent, Republic of Uzbekistan,
Ahmedov Gayrat Keldibaevich
Assistant of the Department of Surgical Diseases of Samarkand State Medical Institute, Samarkand, Republic of Uzbekistan,
e-mail: dr_gayrat@inbox.ru
Khudaynazarov Utkir Rabbimovich
Assistant of the Department of Surgical Diseases of Samarkand State Medical Institute, Samarkand, Republic of Uzbekistan,
Saydullayev Zayniddin Yakhshiboyevich
PhD, Assistant of the Department of General Surgery, of Samarkand State Medical Institute, Samarkand, Republic of Uzbekistan,

Annotation. This article analyzes the diagnostic and therapeutic tactics of treating 234 patients with gastroesophageal reflux disease and complicated with various erosive pathologies of the esophageal mucosa, which were investigated in the diagnostic departments of the Samarkand City Medical Association and the State Institution "Republican Specialized Center of Surgery named after academician V. Vakhidov" in the period 2019-2020. Patients, according to indications, were examined in different modes of endoscopic examination (in the usual and in the narrow-spectrum mode (NBI mode).

Key words: gastroesophageal reflux disease, reflux esophagitis, NBI mode, Barrett's esophagus.

Relevance: Esophageal surgery began in the 19th century, because the complex anatomical location and access to the organ did not allow surgeons to expand their skills. The first operation on the esophagus in dogs was performed by T. Billroth in 1971. He resected and reanastomized the esophagus. And in 1877, another German surgeon, V. Czerny, performed a resection of the esophagus in a person for esophageal cancer, and this patient lived for about a year after the operation. In 1913, the American surgeon F. Thorek removed a malignant tumor of the middle third of the esophagus from the right-sided thoracic access. In 1919, A. Soresi performed an operation for a diaphragmatic hernia. Born in 1956, Nissen used the tactic of "fundoplication" in hernias of the esophageal orifice of the diaphragm.

One of the main clinical signs of hiatal hernias is gastro-esophageal reflux disease. This disease develops when reflux of the gastric contents leads to the patient's anxiety and various complications can develop. 1995. gastro-esophageal reflux disease is recognized as a separate pathology and is included in the list of the international classification of diseases. To date, many operations and modifications have been developed for the surgical treatment of hiatal hernias and gastro-esophageal reflux disease.

According to the authors, scientific studies conducted in Europe and North America have shown that symptoms of gastro-esophageal reflux disease are detected in 40% of the population, of which 25% receive medication, and about 15% need surgical treatment.

The development of diagnostics of the upper digestive tract is associated with the history of endoscopy. The first endoscopes were developed in the 60s of the XX century. After the development of elastic fibroendoscopes, a great era of diagnosis and treatment of esophageal diseases opened. Frequent medical treatment reduces the symptoms, but is not a radical treatment for this pathology. When the medication is discontinued, the clinical course of the disease repeats over time and various complications develop.

Recently, despite the development of diagnostic methods, the increase in the incidence of gastro-esophageal reflux disease does not decrease, and this leads to an increase in the complications of gastro-

ISSN NO: 2770-2936
Date of Publication:18-03-2022

esophageal reflux disease. Therefore, today the problem of early diagnosis and the use of specific treatment tactics remains one of the big problems not only in gastroenterology, but also in other branches of medicine.
Purpose of the research: Study and develop diagnostic and therapeutic tactics in patients with gastro-esophageal reflux disease.

Materials and methods of the research: We analyzed the results of the diagnosis of 1438 patients with gastro-esophageal reflux disease studied in the diagnostic departments of the Samarkand City Medical Association and the State Institution "Republican Specialized Center of Surgery named after academician V. V. Vakhidova" in the period 2019-2020. The age of the patients ranged from 19 to 72 g, with an average of 37.7 l (table 1). Male patients predominated: 557 women (38.7%), 881 men (61.3%). Most of the patients (73.4%) were examined for the first time, and some were examined several times if they suspected different diseases. The main number of patients (78.2%) was of working age.

Table 1
Distribution of patients by gender and age

Gender	19-44 years old	45-59 years old	60-74 years old	>75 years old	Total
Men (n)	586	247	48	-	881
Women (n)	309	216	32	-	557
Total (n)	895	463	80	-	1438

All patients were diagnosed according to the standard. Mostly preferred endoscopic examination, because it is the main and more sensitive method of examination. Of all the patients, 234 (16.3%) were diagnosed with various pathologies of the esophageal mucosa, mainly esophagitis, which was endochromoscopically examined. 195 (83.3%) patients had different types of hiatal hernias.

All patients underwent endoscopic examination in normal and narrow-spectrum mode (NBI mode) using an Olympus CV-170 endoscope. If esophagitis of the esophageal mucosa is suspected, the method of chromoscopy with 1% acetic acid is used on conventional endoscopes, which, when applied, can be seen areas of inflammation, dysplasia and neoplasia of the esophagus. And in the narrow-spectrum mode (NBI mode), different dyes are not used, which is a more convenient, safe and more effective method.

Endoscopes with an image magnification function with a connected auxiliary device that ensures its high quality and an adjustable focal length allow you to perform a detailed examination of the surface of the mucous membrane and capillary structure (i.e., to examine the morphology of the mucous membrane).

Patients with reflux esophagitis were divided according to the classification of M. Savary and G. Miller:

I Stage -diffuse or focal hyperemia of the mucosa of the distal esophagus, separate non-merging erosions extending from the Z-line upwards;

II Stage -merging, but not capturing the entire surface of the mucous erosion;

III Stage -merging and covering the entire surface of the mucous erosion;

IV Stage -chronic ulcerative lesion of the esophagus, fibrous stenosis, cylindrical metaplasia of the esophageal epithelium (Barrett's esophagus).

The endoscopic picture of Barrett's esophagus is considered as bright pink pathological areas against the background of pale pink esophageal mucosa, extending from the mucosa above the cardioesophageal junction-foci of hyperemia ("flames") against the background of the "pearl-white" epithelium of the esophagus. A mandatory criterion for diagnosis is the presence of intestinal metaplasia. The metaplastic mucosa on closer inspection looks atrophic (as in atrophic gastritis) with visualization of vessels having a longitudinal direction.

In 2004, in Prague, the International Working Group on the Classification of Esophagitis put forward criteria based on the maximum length of the flame tongues (M) and the maximum length of the circular segment of the Barrett's esophagus (C). The Prague classification takes into account the foci of the Barrett's

ISSN NO: 2770-2936
Date of Publication:18-03-2022

esophagus with a length of 1 cm or more, located above the cardioesophageal junction. According to the length of the segment of the Barrett's esophagus, there are: a short segment - from 1 to 3 cm and a long segment-more than 3 cm.

To clarify the diagnosis, all patients (n=234) were examined in both modes and suspected complications were biopsied from several pathological sites (at least 3-4 fragments at a distance of about 1-2 cm from each other) and followed by histological examination to verify the pathological changes.

Research results and their discussion. Of all patients with pathological changes in the esophageal mucosa (n=234), 186 underwent endoscopy in the normal white mode using chromoscopy with 1% acetic acid, and 154 patients underwent the study in the NBI mode.

In many studies, especially in the NBI mode, an uneven structure of the mucosa was revealed: mainly (74.3%) the villous (sinuous) structure of the mucosa. The rest revealed a flat type of esophageal mucosa. In several patients, esophagitis is marked by mucosal edema with foci of hyperemia (in the form of red spots) with different sizes, and a pathological vascular structure was found in many (93%) studies. In more severe forms of esophagitis, the mucosa is covered with a spot-like plaque (necrotic pseudomembrane), which is easily removed and may develop mild bleeding. I must say that the enlarged and narrow-spectrum mode is more convenient and better than chromoscopy in normal mode.

Chromoscopy using dyes has several disadvantages:

- during the study, dyes and catheters are needed for spraying – this definitely extends the time of the study,
- some dyes may be contraindicated in patients with allergic reactions to them,
- the dye is sometimes unevenly distributed, usually accumulating between the folds,
- the examination is performed in white light, i.e. it is not possible to simultaneously switch to other chromoscopic backgrounds that can be seen more accurately.
- after staining, sometimes it is not possible to clearly assess the morphology of different structures of the esophageal mucosa.

In NBI studies in 18 (7.7%) patients in 26 sites, and in endoscopy with chromoscopy in 14 patients in 16 sites, the presence of cylindrical cells and goblet cells in the esophageal epithelium, which are characteristic features of Barrett's esophagus, was revealed. Esophageal adenocarcinoma was detected in 3 (1.3%) patients.

Repeated endoscopic examinations (26.6%), after the use of conservative therapy (with proton pump inhibitors and a combination of H_2-receptor antagonists) revealed shortening and improvement of erosive changes in the esophageal mucosa, and in patients with Barrett's esophagus, the average length was shortened than in patients who did not take medication. But in 2 patients, after a year of detection and receiving 2 courses (2-3 months each) of conservative therapy, deterioration and complications were revealed.

Patients with esophagitis of the II-III degree and with hernias of the esophageal orifices of the diaphragm underwent various antireflux operations (mainly fundoplication according to Nissen in various modifications when indicated). Patients with esophageal adenocarcinoma are referred to a cancer dispensary for complex therapy.

Conclusions:

1. Gastro-esophageal reflux disease is one of the more common diseases that has serious complications (esophagitis, ulcer, stricture, Barrett's esophagus and adenocarcinoma), which is important to diagnose in time and determine treatment tactics.

2. For the diagnosis of erosive and dysplastic changes in the esophageal mucosa, the endoscopic method with the NBI mode is a more informative method, which has additional features than the endoscope in the usual mode with the use of chromoscopy.

3. Patients with esophagitis of the II-III degree and with hernias of the esophageal orifices of the diaphragm underwent various antireflux operations, and when detecting Barrett's esophagus and adenocarcinoma, complex treatment is indicated.

ISSN NO: 2770-2936
Date of Publication:18-03-2022

References:

1. Akhmedov G. K., Babajanov A. S. (2020). The role of endoscopic diagnostics in various diseases of the esophagus. Proceedings of the XV conference "Modern problems and promising directions of innovative development of science" International Conference, Dushanbe. (pp 125-126).
2. Babajanov, A. S., Akhmedov, G. K., Akhmedov, A. I., & Obidov, Sh. Kh. (2016). Improving the methods of hernioplasty in simultaneous abdominal diseases. "Science and World" International Scientific Journal, *3*(6 (34)), 29.
3. Babajanov A.S., Achilov M.T., Ahmedov G.K., Tukhtaev J.K., Saydullaev Z.Ya. Improvement of methods of hernioabdominoplasty with simultaneous surgical diseases. // ISSN 2308-4804. Science and world. 2020. №4 (80). Vol. II. 65-67.
4. Banerjee, R., & Reddy, D. N. (2018). Role of Endoscopy and Novel Imaging in GERD. In *The Rise of Acid Reflux in Asia* (pp. 63-83). Springer, New Delhi.
5. Eluri, S., & Shaheen, N. J. (2017). Barrett's esophagus: diagnosis and management. *Gastrointestinal endoscopy*, *85*(5), 889-903.
6. Grintcov A.G., and others. Causes of unsatisfactory results after laparoscopic hiatal hernia repair. Research and Practical Medicine Journal. 2021;8(1):40-52.
7. Gulamov, O. M., Babajanov, A. C., Akhmedov, G. K., & Tukhtaev, J. K. (2019). Surgical tactics for hernias of the esophageal orifice of the diaphragm. In *SCIENCE AND INNOVATION IN THE 21ST CENTURY: CURRENT ISSUES, DISCOVERIES AND ACHIEVEMENTS* (pp. 195-197).
8. Gulamov, O. M., Babajanov, A. S., Akhmedov, G. K., & Khudaynazarov, U. R. (2013). PROBLEMS OF DIAGNOSIS AND TREATMENT OF BARRETT'S ESOPHAGUS. *SCIENCE AND WORLD*, 75.
9. Gulamov, O.M., Babajanov, A.S., Ahmedov, G.K., Achilov, M.T., Saydullaev, Z.Ya., Khudaynazarov, U.R., Avazov, A.A. Modern methods of diagnosis and treatment of barrett esophagus. // Doctor's herald. №2(94)-2020. ISSN 2181-466X. 116-120. DOI: 10.38095/2181-466X-2020942-116-120.
10. Gulamov, O.M., Babajanov, A.S., Ahmedov, G.K., Khudaynazarov, U.R. Problems of diagnosis and treatment of barrett's esophagus. // ISSN 2308-4804. Science and world. 2020. №4 (80). Vol. II. 75-77.
11. Kolb, J. M., & Wani, S. (2021). Barrett's esophagus: current standards in advanced imaging. *Translational Gastroenterology and Hepatology*, *6*.
12. Mirzakhitovich G.O., Keldibaevich A.G., Sultanbaevich B.A., Shokirovich Y.SH. & Pardaboevich R.J. (2021). Efficiency results of the application of different endoscopic studies in diagnostics and treatment of erosive and dysplastic changes of the esophagus mucosa. SCIENTIFICJOURNAL. ISSN 2541-7851. № 5 (108). P 2. (15-20).
13. Mirzakhitovich G.O., Sultanbaevich B.A., Keldibaevich A.G., Ibodullayevich A.I. & Usmanovich SH.Q. (2021). Diagnostic and treatment tactics in gastroesophageal reflux disease. SCIENTIFICJOURNAL. ISSN 2541-7851. № 3 (106). P 2. (62-66).
14. Wang, C. C., Chiu, Y. C., Chen, W. L., Yang, T. W., Tsai, M. C., & Tseng, M. H. (2021). A Deep Learning Model for Classification of Endoscopic Gastroesophageal Reflux Disease. *International Journal of Environmental Research and Public Health*, *18*(5), 2428.
15. Trepanier M., and others. Comparison of Dor and Nissen fundoplication after laparoscopic paraesophageal hernia repair. Surgery. 2019;166(4): 540-546.
16. Siegal SR, and others. Modern diagnosis and treatment of hiatal hernias. Langenbecks Arch Surg. 2017 Dec;402(8):1145-1151.
17. Gyawali, C. P., Kahrilas, P. J., Savarino, E., Zerbib, F., Mion, F., Smout, A. J., ... & Roman, S. (2018). Modern diagnosis of GERD: the Lyon Consensus. *Gut*, *67*(7), 1351-1362.