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Hiatal Hernias, Diagnosis and Treatment

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Annotation: The work in question dealt with the treatment of hernias, as a not rare disease, but heard quite often by people who seek health care. Based on studies, hernia is the protrusion of intra-abdominal organs through natural or acquired openings in the abdominal wall, resulting in a disproportion between intra-abdominal pressure and abdominal wall strength. Based on the type of hernias, it also depends on their treatment. So based on the type of hernias, they are of several types, it usually involves the abdomen, especially the groin. Hernias that are part of the hips can also include the femoral part. Based on the symptoms of hernias, we can say that they are all the same, which begin with pain or discomfort, especially during coughing. In most cases, hernias worsen during the day and improve when the patient is lying down. In the cases of people affected by hernias, based on practice, when these people sought health protection or help from a doctor, the main cause was great pain in the intestines with great sensitivity and unbearable. From this symptom it is understood that the person who seeks medical help suffers from abdominal pain. The same happens with hernias in other parts, so the symptoms or pain that the patients show are almost the same. The purpose of obtaining this topic for research is to explain hernias in general and based on practice to show that the symptoms, specifically the pains shown by patients, are the same in all types of hernias and that they can be distinguished from the description of pain from the patient. Thus, during the content of this paper, I will present some of the cases of people affected by hernias, through writing as well as.

Keywords: hernias, classification, identification, rehabilitation, healing.

INTRADUCTION

The paper in question contains data on hernias, starting from the presentation of the disease, identification, diagnosis and rehabilitation. Thus, based on the statements and studies related to hernias, it is understood that it is a disease that presents great and unbearable pain to the patient. Specifically, a hernia is the protrusion of intra-abdominal organs through natural or acquired openings in the abdominal wall, resulting in a disproportion between intra-abdominal pressure and abdominal wall strength. At the moment when it is noticed that a hernia has appeared in a person, then it should be looked at in its approach, in which place it has appeared, then it should be seen how big the opening of the hernia is, and what the hernia contains. From what has been said, it is understood that hernias can appear in several places, such as in the groin (inguinal), in the navel (umbilical) and above the navel (epigastric). Among the most common among patients are groin hernias (inguinal hernias), which represent 85% of all hernias, and which are most often found in the femur, i.e. in the leg with 8-10%, then umbilical hernias with 3% and the remaining percentage all other hernias. Based on gender, we can say that hernias are more common in men than in women, especially inguinal hernias. It is important for hernias to diagnose and rehabilitate the patient when they appear. I will talk more about hernias during the content of the paper.

METHODOLOGY

Appropriate scientific methods were used for the formation of this paper, which make it understandable and with appropriate scientific content. Among these appropriate scientific methods that we have used in the work are: the scientific method, with which we have presented the scientific discoveries that have been made about hernias. We also used the statistical method, with which we showed the percentage of the disease and in which countries it is more common. Later, other methods were used, such as the descriptive method, the deduction method, the induction method, the historical

method, and some other methods, which make the work in question take on a scientific meaning and have an appropriate scientific content.

RESULTS OF THE PAPER

Hiatal hernia refers to the herniation of elements of the abdominal space through the esophageal hiatus of the diaphragm. It is a frequent finding by both radiologists and gastroenterologists.

Classification:

Hiatal hernias are broadly divided into two major groups: sliding hernias and paraesophageal hernias (Figure 1). However, the most complete classification scheme counts four types of hiatal hernias.

Type I - sliding hernia: It is characterized by displacement of the esophagogastric passage over the diaphragm more.

Type II, III, IV - paraesophageal hernia. It is a true hernia with a hernial sac composed of the peritoneum and characterized by a high displacement of the fundus of the esophagus through a focal defect in the phrenoesophageal membrane.

Type II: It results from the localized defect in the phrenoesophageal membrane, where the fundus of the esophagus serves as the main point of the hernia, while the esophagogastric passage (EG) remains fixed in the para-aortic band and the middle arcuate ligament (figure 1).

Type III: Hernias of this type have elements of both type I and II hernias and are characterized by herniation of the EG passage and fundus of the luteum through the hiatus. The fundus lies above the EG passage (figure 1).

Type IV: This type of hiatal hernia is associated with a large defect in the phrenoesophageal membrane and, in addition to the hernial pouch, is characterized by the presence of other organs (eg, colon, spleen, pancreas or small intestine) (figure 1).

More than 95% of hiatal hernias are type I, i.e. sliding, while the rest of hiatal hernias, about 5%, are other types, i.e. type II, III, IV paraesophageal hernias.

Etiology: Although the etiology of most hiatal hernias is speculative, trauma, congenital anomalies, and other iatrogenic factors have been implicated in some patients with sliding type I hiatal hernias. Type II, III and IV (paraesophageal) hernias are known complications of hiatus surgical dissection and occur during antireflux procedures, esophagomyotomy or partial gastrectomy. The causative mechanism of hiatal hernia type I (sliding) results from the progressive disconnection of the EG passage, first with the loss of the intra-abdominal length of the esophagus, then with progressive expansion of the esophageal hiatus and then herniation of the gastric cardia.

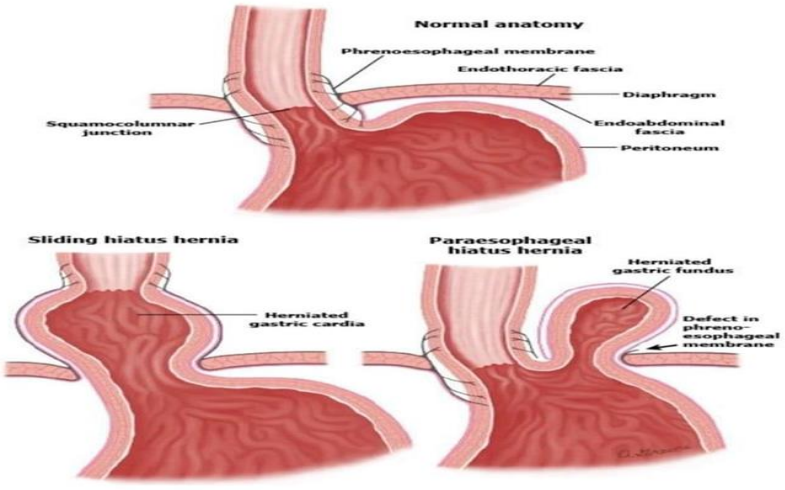

Figure 1. Types of hiatal hernias: Sliding and paraesophageal (Kahril PJ, KIM HC, Pandolfi-no JE. Approaches to the diagnosis and grading of hiatal hernia. Best Pract Clin Gastroenterol

Hiatus hernia type I and gastroesophageal reflux (GERD)

Endoscopic and radiological studies have shown that 50-94% of patients with gastroesophageal reflux disease (GERD) have type I HH, compared with 13-59% of patients without GERD disease. The possibility of having GERD disease increases with the anatomical compromise of the EG passage (figure 2) and the size of the hiatal hernia. Type I hiatal hernia affects reflux by affecting the ability of the EG passage to prevent reflux and by compromising the process of clearing esophageal acid after reflux has occurred. The main function of the EG passage is to limit the reflux of gastric contents, including gastric acid, into the esophagus. A degree of reflux is necessary to facilitate the release of gas (gogesima) and vomiting, but with incompetence of the EG passage there is excessive reflux of gastric acid into the esophagus leading to symptoms of reflux and esophagitis. Reflux occurs mainly during in-spirium and can be attributed to the loss of the normal function of the one-way valve of the diaphragmatic scrotum as a result of their expansion.

Type II, III, and IV: Paraesophageal hernia

It is characterized by weakening of the gastrosplenic and gastrocolic ligaments, which normally prevent the displacement of the pelvis. As the hernia enlarges, the great curve of the stomach enters the axilla, often rotating and causing gastric volvulus, which presents a surgical emergency. rgic to prevent necrosis and sepsis.

Clinical signs:

Type I (sliding) hiatal hernias are often asymptomatic or associated with symptoms of reflux disease. Patients with type I hiatal hernias are usually associated with reflux esophagitis. However, large type I hernias can be associated with Cameron lesions, which appear as linear erosions at the level of the hiatus and are the cause of ferrodeficiency anemia. Meanwhile, patients with type II, III and IV hernia, i.e. paraesophageal hernia, may be asymptomatic or have only symp-indistinct tomes, with an epigastric discomfort. Symptoms of GERD are significantly less compared to patients with type I hernia. The most frequent complications of paraesophageal hernias are due to mechanical problems caused by the hernia such as: gastric volvulus, bleeding caused by erosions gastritis, ischemia and dyspnea, etc.

Diagnosis:

The diagnosis is preceded by complaints of hiatal hernias such as signs of reflux, heartburn, regurgitation and dysphagia as well as the history of surgical interventions in the hiatus such as: gastroesophageal (GERD), the most common of which are heartburn, regurgitation and dysphagia. Complications are rare in the absence of antireflux procedures, esophagomyotomy or partial gastrectomy. However, hiatal hernia is usually diagnosed incidentally during upper gastrointestinal endoscopy, manometry or Volume 4 imaging examinations done for other reasons.

Upper gastrointestinal endoscopy tinal (GI):

During upper gastrointestinal endoscopy, the longitudinal axis of the sliding hiatal hernia is measured by the degree of separation between the squamocylindrical epithelial transition and the diaphragmatic impression as seen in retroflexion through the endoscope and after insufflation of the balloon and traction along the lesser curve to cause herniation. Hill provides an endoscopic grading system for the morphology and competence of the esophagogastric passage, particularly whether the gastroesophageal valve flap is normal (grade I/II) or abnormal (grade III/IV).

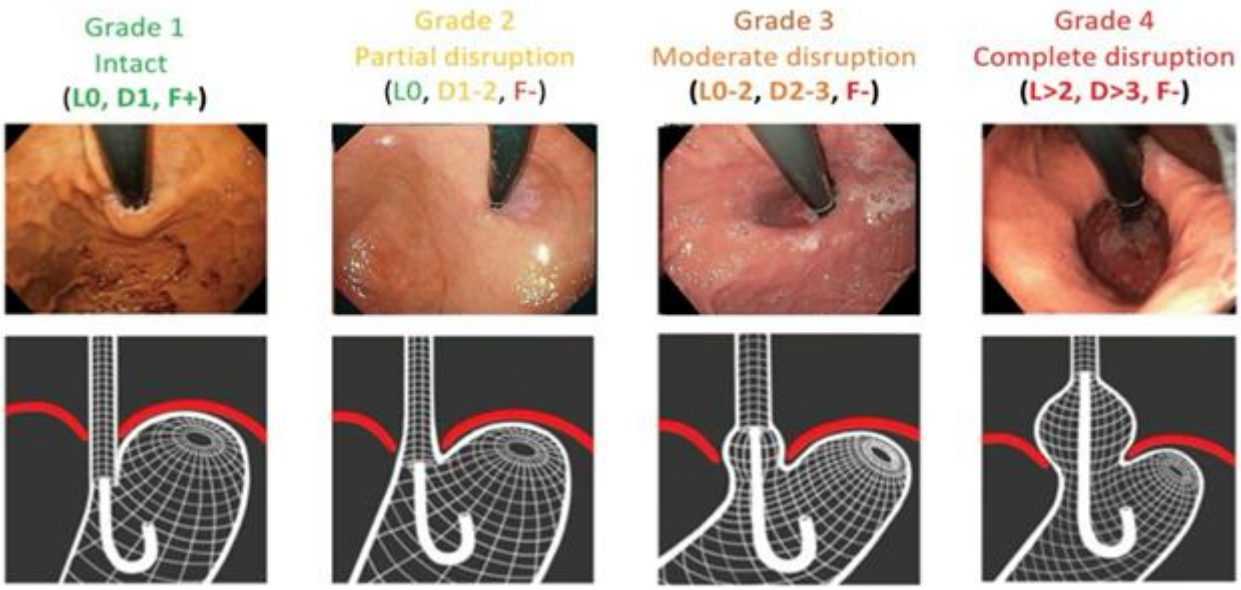

Figure 2. Hiatal hernia rates assessed by endoscopy (Nguyen, N.T., et al. The American Foregut Society White Paper on the Endoscopic Classification of Esophagogastric Junction Integrity. Foregut: The Journal of the American Foregut Society 2(4), pp.339-348

Esophagogastrography with barium contrast:

A barium swallow can determine the anatomy and size of the hernia, the orientation of the hernia, and the location of the gastroesophageal junction (Figure 5). Sliding hiatus hernia is characterized by a cosal and diaphragmatic hiatus (figure 5B). If the Z line is not visible on barium swallow, demonstration of at least three mucosal folds crossing the diaphragm is diagnostic of a sliding hiatus hernia (Figure 5C). Visualization of the portion of the gastric fundus passing along the distal esophagus on barium swallow is diagnostic of hernia.

High resolution manometry:

Another diagnostic method for determining hiatal hernia, along with endoscopy of the upper gastrointestinal tract and imaging with barium contrast, is also high-resolution manometry in determining the distance between the diaphragmatic crus and the lower esophageal sphincter. From a series of analyzes of patients with hiatal hernia who underwent surgery, it follows that high-resolution manometry, compared to endoscopy and barium imaging, was superior in detecting and determining the size of the hiatal hernia with a sensitivity of 94%, and a specificity of 92% and kappa value of 0.858.

Treatment of hiatal hernias:

In asymptomatic type I sliding hiatal hernia, surgical repair is not indicated. Meanwhile, the management of patients with symptomatic sliding hiatus hernia consists of the management of gastroesophageal reflux disease (GERD). Lifestyle modification and medications are the first-line treatment for GERD. Surgical or endoscopic treatment is generally reserved for patients who have persistent symptoms or develop complications despite optimal medical therapy.

Surgical treatment of gastroesophageal reflux (GERD)

Antireflux surgical procedures are most often performed on patients to control gastrointestinal symptoms (eg, heartburn and regurgitation). It may also be performed for non-gastrointestinal symptoms (eg, chronic cough, laryngeal disease, and asthma) when there is objective evidence that these symptoms are attributable to reflux.

Choice of procedure

So far there is no one procedure chosen as "best" for all patients with GERD. Ideally, rather than being offered a single antireflux procedure, patients should be offered a large number of procedures when the necessary surgical expertise is available rgical and endoscopic.

Contemporary anti-GERD procedures currently available are:

- ✓ Incisionless transoral fundoplication (TIF) with or without hiatal hernia repair
- ✓ Increasing the tone of the lower esophageal sphincter with magnets (MSA)
- ✓ Laparoscopic gastropexy according to Hill
- ✓ Laparoscopic partial fundoplication (according to Dor & Toupet)
- ✓ Laparoscopic Nissen fundoplication (full).

All of these procedures differ in efficacy and durability on the one hand and adverse effect profiles on the other.

Although laparoscopic Nissen fundoplication is highly effective in relieving GERD symptoms and is the most durable of all procedures, although it is also associated with the greatest potential for adverse side effects, such as dysphagia, difficulty in vomiting and inability to release gas-yawning). On the other hand, endoscopic procedures such as Stretta and TIF are less likely to be associated with adverse effects. However, their efficacy and durability are not as good as those of a full fundoplication. Partial fundoplications, the Hill procedure, and MSA generally fall in the middle of the spectrum, balancing both efficacy/durability and adverse effect profile. Based on currently available data, the choice of anterior versus posterior or partial versus complete (Nissen) fundoplication should be left to the individual, experienced surgeon. Many studies and meta-analyses have shown that well-performed partial fundoplication can result in similar reflux control as well-performed full fundoplication.

Surgical treatment of paraesophageal hernia:

Surgical treatment is indicated in patients with symptomatic or complicated paraesophageal hernia, the urgency of which depends on the degree of presentation of the complication. Some experts recommend prophylactic surgical treatment of paraesophageal hiatal hernia even in the absence of symptoms, while most experts are against it, since the annual risk of developing acute symptoms requiring emergency surgery is less than 2% and the mortality rate from elective surgical treatment of paraesophageal hernia is approximately 1.4%. Surgical treatment of paraesophageal hernia can be urgent, elective and prophylactic. Urgent surgical treatment is required in pa

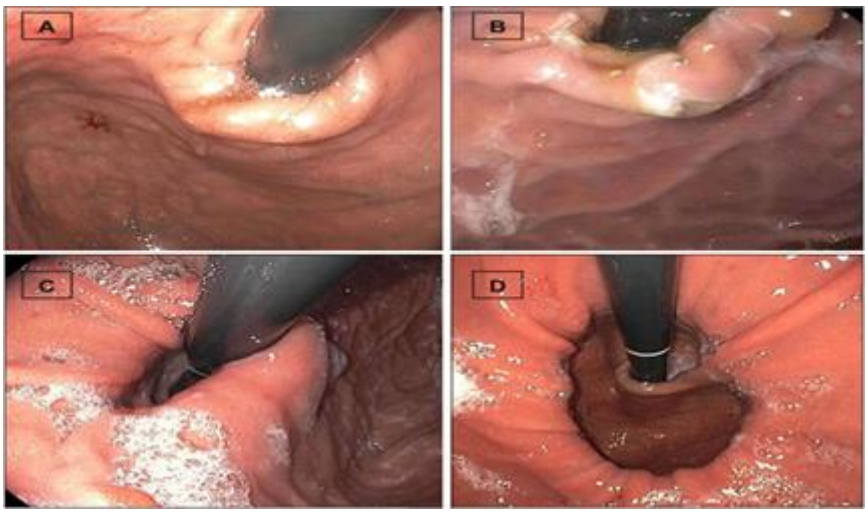

Figure 3. Hill's classification of esophagogastric reflux A/B the gastroesophageal valve flap is normal C/D the gastroesophageal valve flap is abnormal. Dis Sci 2021 Jan 66 1 151 -159

Patients with gastric volvulus, uncontrolled bleeding, obstruction, strangulation, perforation and compromise of the respiratory system caused by paraesophageal hernia. The surgical approach for paraesophageal hernia repair can be transabdominal and transthoracic. An abdominal, laparoscopic or robotic approach is preferred. The open approach is reserved when the patient has relapsed or has undergone surgery earlier. The basic principles of paraesophageal hiatal hernia repair with a transabdominal approach include dissection and complete reduction of the mediastinal hernia sac, mobilization of the esophagus to displace the intra-abdominal esophagogastric passage, closure of the diaphragmatic hernia, antireflux-fundoplication procedure.

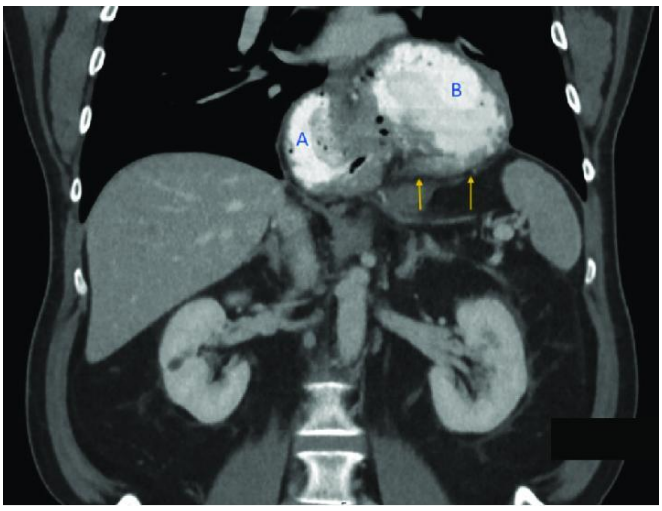

Figure 4. View in retroflexion during endoscopy of the lung showing diaphragmatic defects with a shaded part of the lung. (Yousaf MN, Duffy AJ, Aslanian HR Endoscopic diagnosis of paraesophageal hernia with gastric valve.

CONCLUSION

In the content of the paper, we understand that the hernia disease is a disease that can appear at any age, but with greater differences in the male gender and in the hip parts. Thus, from the location of the lesions, we can conclude that these can be cured with medication, but not with a high degree of certainty. Based on medical practice, hernias are partially or completely cured by diagnosis and surgical operation. In these cases, we can specify that hip hernias can be treated with surgical intervention and with the help of anesthesia. In the past tension techniques that did not use mesh were more often used, while nowadays non-tension methods are used where meshes can be used. Before operations, patients are advised to be careful about lifting heavy weights, jumping, be careful when coughing and sneezing, they should hold and apply pressure to the area where the hernia has appeared. But it is understood that nowadays everything is easier, and the surgical treatment of hernias is easier for the patient, based on modern surgical techniques and the use of special nets, the postoperative period is much faster and it is necessary to patients should be careful and not engage in heavy loads or heavy physical work only during the first two weeks. While in periods after the first two weeks, patients can do light physical activities.

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