ADVANCES IN GERD

Current Developments in the Management of Acid-Related GI Disorders

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Treatment of Older Patients With Hiatal Hernia

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G&H Is hiatal hernia more prevalent in older patients than in younger patients?

JW Hiatal hernia occurs more commonly among older patients than among younger adults. It is believed that the size of the hiatal hernia increases as patients age. We are not exactly sure why this happens, though it is most likely associated with the increase of intra-abdominal positive pressure over the years, which enlarges the diaphragmatic opening and pushes the hiatal hernia upward.

G&H Could you describe the various manifestations of hiatal hernia? Which are most common in older patients?

JW There are four types of hiatal hernia. A type 1 hernia is called a sliding hiatal hernia and is the most common type in both older and younger patients. In a type 1 hernia, the gastroesophageal junction is pushed above the diaphragm, causing a symmetric herniation of the proximal stomach.

A type 2 hernia is called a "true" paraesophageal hernia. By definition, a paraesophageal hernia means that the fundus slides upward and moves above the gastroesophageal junction. A type 2 hiatal hernia is usually a postoperative condition caused by a fundoplication, where the gastroesophageal junction remains at the level of the diaphragm but the fundus slides upward next to the wrap.

A type 3 hernia is called a "mixed" paraesophageal hernia, which is a combined sliding and paraesophageal herniation. Both the gastroesophageal junction and the fundus are pushed above the diaphragm, with the fundus moving even higher than the gastroesophageal junction. In older patients, the type 1 sliding hiatal hernia becomes larger over time and may eventually develop into a type 3 paraesophageal hernia. A type 3 paraesophageal hernia is uncommon in young patients.

A type 4 hernia is a "complex" paraesophageal hernia and fortunately is rare. It is defined by the intrathoracic herniation of other organs, such as the colon, small bowel, and omentum, into the hernia sac of the paraesophageal hernia.

G&H Could you discuss the presenting symptoms of older patients with hiatal hernia and whether they differ from those in younger patients?

JW The most common symptom of hiatal hernia is heartburn in both older and younger patients. Older patients may present with less frequent and milder heartburn and more atypical symptoms such as chest pain, cough, shortness of breath, and aspiration. As the hiatal hernia enlarges, regurgitation may be more prominent, especially at night or when bending over.

It is very important to be aware that patients with type 3 paraesophageal hernia may present with severe chest pain, retching, vomiting, and hematemesis because paraesophageal hernias can twist and cause strangulation in the chest, which would be considered a surgical emergency. Thus, it is very important to consult patients on the complications of a paraesophageal hernia and ask them to seek medical attention immediately if these symptoms occur.

It should also be noted that in some cases, patients with paraesophageal hernias can present with iron-deficiency anemia without acute bleeding, as the diaphragm becomes so irritated that the patient may lose blood

chronically. Iron-deficiency anemia may not be a visible symptom, but it is an important one.

G&H Could you discuss the treatment options for older patients with hiatal hernia, and how age affects or complicates treatment choice?

JW I believe that the best treatment option is proton pump inhibitor (PPI) therapy, as it has been shown to be easy and safe in older patients. Endoscopic therapy should not be recommended at this time without positive long-term data from sham-controlled trials. As endoscopic therapy has not been demonstrated to be effective in young patients, I do not believe that we should implement it in older patients. Laparoscopic antireflux surgery is effective in reducing a type 1 sliding hiatal hernia, but PPIs should be tried first. The dose of the PPI can be increased if necessary. Fundoplication may cause debilitating dysphagia, gas bloat, and gastroparesis in some patients.

Postfundoplication type 2 paraesophageal hernias can occur without symptoms or with symptoms that may not be related to the hernia. Re-operation should be avoided, unless the patient develops dysphagia, postprandial chest pain, or strangulation symptoms due to large paraesophageal herniation next to the wrap.

It is reasonable to perform laparoscopic repair for a type 3 paraesophageal hernia in a relatively healthy older individual if the surgical expertise is available. However, close observation can be a reasonable approach in patients without complicated symptoms. As mentioned above, it is very important to recognize the signs of impending strangulation in a patient with paraesophageal hernia to surgically correct it and avert a life-threatening situation.

G&H Do older patients experience any significant side effects from long-term PPI use?

JW This question is frequently asked by many of my patients. We now know that PPIs do not suppress all gastric acid. The potential problems of a "lack of acid" causing digestive malabsorption, bacterial overgrowth, and the inability to absorb vitamins have not been borne out as legitimate concerns.

Recently, the question has arisen as to whether long-term use of PPIs causes hip fracture. A European population-based study was conducted using the General Practice Research Database in the United Kingdom, which suggested that patients taking PPIs have a higher risk for hip fracture. However, this finding is merely an association; there is no direct proof. I do not believe that the association is based upon suppression of gastric acid. Perhaps it is based on the effect of the PPI on the bones, but this has not been confirmed.

Use of PPIs is essentially a risk-benefit issue. If the patient does not need PPIs, he or she should stop or at least lower the dose. However, if he or she really does need PPIs, I believe that it is safe to continue. The jury is still out, as this is just one issue that should be taken into consideration in the decision-making process. I personally do not stop PPIs in older patients because I believe that the risk is most likely low and if the PPI is needed by the patient, the benefit is higher.

Suggested Reading

Stilson WL, Sanders I, Gardiner GA, Gorman HC, Lodge DF. Hiatal hernia and gastroesophageal reflux. A clinicoradiological analysis of more than 1,000 cases. *Radiology.* 1969;93:1323-1327.

Wo JM, Branum GD, Hunter JG, Trus TN, Mauren SJ, Waring JP. Clinical features of type III (mixed) paraesophageal hernia. *Am J Gastroenterol*. 1996;91: 914-916.

Yang YX, Lewis JD, Epstein S, Metz DC. Long-term proton pump inhibitor therapy and risk of hip fracture. *JAMA*. 2006;296:2947-2953.

Gangopadhyay N, Perrone JM, Soper NJ, Matthews BD, Eagon JC, et al. Outcomes of laparoscopic paraesophageal hernia repair in elderly and high-risk patients. *Surgery.* 2006;140:491-498; discussion 498-499.

Panzuto F, Di Giulio E, Capurso G, Baccini F, D'Ambra G, et al. Large hiatal hernia in patients with iron deficiency anaemia: a prospective study on prevalence and treatment. *Aliment Pharmacol Ther.* 2004;19:663-670.

Freston JW, Triadafilopoulos G. Review article: approaches to the long-term management of adults with GERD—proton pump inhibitor therapy, laparoscopic fundoplication or endoscopic therapy? *Aliment Pharmacol Ther.* 2004;19 (suppl 1):35-42.