

Hiatal Hernia: A Cause of Esophageal Reflux Disease

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DESCRIPTION

A hiatal hernia is the protrusion of the stomach upward into the mediastinal cavity through the esophageal hiatus of the diaphragm. In normal, a portion of esophagus and all the stomach are situated in the abdominal cavity. Scientists found significant correlation between *H. pylori* infection and hiatal hernia, considered as a supporting element of Gastroesophageal Reflux Disease (GERD), and significantly associated with the development of esophagitis. Increased pressure within the abdomen is caused by heavy lifting or bending over, frequent or hard coughing, hard sneezing, pregnancy and delivery, vomiting, constipation and obesity.

Pathophysiology

Normally, the esophagus passes down through the chest, crosses the diaphragm and enters the abdomen through a hole called esophageal hiatus. Just below the diaphragm, the esophagus joins stomach. In individuals with hiatal hernia, the opening of the esophageal hiatus (hiatal opening) is larger than normal, and a portion of the upper stomach passes through the hiatus and enters the chest.

Types

Hiatal hernia is of 2 type's namely sliding hiatal hernia and paraoesophageal hiatal hernia.

Sliding hiatal hernia: It occurs when the junction between stomach and esophagus slides up through the esophageal hiatus during moments of increased pressure in the abdominal cavity. When the pressure is relieved, the stomach falls back down with gravity to its normal position. Approximately, 90% of all hiatal hernias are sliding type.

Paraoesophageal hiatal hernia: In this type, a portion of the stomach remains stuck in the chest cavity. This is a less common type.

Diagnosis

Various tests are used to diagnose a hiatal hernia such as chest x-ray, barium x-ray, endoscopy, esophageal manometry, 24-48 h esophageal pH monitoring to quantify reflux, gastroscopy with biopsy to rule out cancer and esophagitis, Computed Tomography (CT) scan, etc.

Barium x-rays: Also known as barium swallow are diagnostic x-rays in which barium is used to diagnose abnormalities of the digestive tract including hiatal hernias.

Upper endoscopy: Also known as esophagogastroduodenoscopy allows the healthcare professional to examine the patient's esophagus, stomach and duodenum with an instrument called endoscope.

CT scan: Used especially for evaluation of a paraoesophageal hernia to identify the size of hernia and other organs which may be involved.

Clinical manifestation

Patients with sliding hiatal hernia may have heartburn, regurgitation, dysphagia, but at least 50% are asymptomatic. Larger hernias are frequently associated with Gastroesophageal Reflux Disease (GERD) due to decreased competence of the Lower Esophageal Sphincter (LES).

Treatment

Sliding hiatal hernia can be treated by preventing smoking, weight loss, avoiding too much alcohol, coffee, mint, fat, etc. It can be treated by using antacids, cimetidine, omeprazole and prokinetic agents such as metoclopramide. Also, can be treated by using fermented or cultured foods that are rich in probiotics (acid-neutralizing stomach bacteria such as *Lactobacillus acidophilus* and *Bifidobacterium* strains) which may also help reduce hiatal hernia symptoms. It is important to note that consuming processed sugar alongside probiotics may be counterproductive.

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When hernia symptoms are severe or chronic acid reflux is involved, surgery can be recommended. The surgeon will reduce the stomach and other content of the hernia into the abdominal cavity. Some of the surgeries are anti-reflux procedure (eg: fundoplication), gastropexy (suturing the stomach to anterior abdominal wall) and Percutaneous Endoscopic Gastrostomy (PEG) which is usual in elderly patients.

In fundoplication, the gastric fundus (upper part) of the stomach is wrapped around the inferior part of the esophagus, preventing herniation of the stomach through the hiatus in diaphragm and reflux the gastric acid.