Summary&Conclusion

The diaphragm is a domed fibromuscular sheet that separates the abdominal and thoracic cavities. The major role of the diaphragm is inspiratory, but it is used also in abdominal straining.

The esophageal hiatus is an elliptical opening in the muscular part of the diaphragm at about the T10 vertebral level. Because of the domelike shape of the diaphragm, the superior margin of the hiatus lies anterior to its inferior margin. The length of the average hiatus is 3 cm. Through its upper two-thirds, the esophagus courses obliquely from the thorax to the abdomen in a posterior to anterior and a right to left direction.

The phrenoesophageal membrane (PEM) is alayer of connective tissue, that forms a flexible fascial attachment between the diaphragm and esophagus at, below, and above the hiatus. It allows normal physiologic movements, but prevents formation of a hiatus hernia. This membrane normally loses its elasticity and becomes fat-laden in older individuals.

Hiatus hernia occurs when a portion of the stomach prolapsed through the diaphragmatic esophageal hiatus, Hiatus hernia is classified as type I, II, III, IV depending on the specific abnormality present. The term paraesophageal hernia is sometimes used to describe any type II, III, or IV hiatal hernia

Para esophageal hiatus hernia accounts for only 5% of all hiatal hernias, but implies a greater risk for patients because it is associated with life-threatening complications.

Hiatus hernia is rarely symptomatic (outside of GERD), although when large, may present with recurrent severe chest or epigastric pain and vomiting due to intermittent volvulus, or with GI bleeding due to linear hiatal ulcers**.**

Evaluation of a patient with a known or suspected PEH depends on the acuity of the presentation and surgeon preference. The goals of the diagnostic evaluation are to establish or confirm the diagnosis of PEH, define the anatomy of the hernia, rule out associated pathologies, and determine the presence or absence of GERD.

Investigation done is Chest X-ray, barium Upper gastrointestinal series to define the hernia, Flexible upper endoscopy to rule out other anatomic abnormalities. Computed tomography scan can be helpful, but is not routinely required. Finally, pH monitoring and gastric emptying studies are unnecessary or are unreliable in the setting of a giant HH

The initial description of the PEH repair by Akerlund in 1926, The first laparoscopic PEH repair was described by Cuschieri and Colleagues in 1992. Since that time this approach has been widely adopted, driven by patients and physicians desiring a less morbid repair

Watchful waiting may be a reasonable alternative for the initial management of patients with minimally symptomatic PEH. However, if an expectant approach is taken to symptomatic patients, there is a significant risk of the requirement for urgent or semi-urgent surgery because of deteriorating symptomatology. When repair is attempted as an urgent procedure because of gastric volvulus with obstruction or strangulation, the risk of mortality is high. The majority of patients with symptomatic PEH

mare elderly and therefore the perceived risks of surgery may dissuade clinicians for referral for a surgical opinion

The three approaches for repair of PEH are

(1)Open Trans thoracic.

(2) Open Trans abdominal.

(3) Laparoscopic.

Regardless of the approach, the tenets for a successful repair of PEH are tension-free reduction of hernia contents into the sub diaphragmatic position, removal of the hernia sac, and closure of the hiatal defect. Most surgeons also agree that performing an antireflux procedure is an important element of a successful PEH repair. The role of fixation of the stomach below the diaphragm with gastropexy or gastrostomy is debated

It has generally been assumed that patients undergoing laparoscopic surgery will have less pain and a faster return to normal activities, hospital stay was less in the laparoscopic group. Initially there has been some question about whether a laparoscopic surgery would be as effective as the open surgery

Outcome after laparoscopic repair of large type II and III hiatal hernias, however, is controversial. Early reports showed low rates of recurrence, but without objective radiological follow-up data, or with relatively short follow-up. Series with radiological midterm follow-up after laparoscopic repair of large hiatal hernia without a mesh showed a recurrence rate ranging between 0% and 42%.A major concern regarding laparoscopic repair of paraesophageal hernias is the surgical technique.

It's concluded in:

ž The best surgical approach for repairing PEH continues with several studies reporting that each approach can be performed safely with acceptable outcome.

ž Although short esophagus is uncommon, it remains an important cause of recurrence following PEH repair.

ž Comparing hiatus hernia repair with or without mesh showed lower recurrence rate in favor of a mesh cruroplasty.