Esophageal High Resolution Impedance Manometry: The GI Nurse Role.

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Esophageal High Resolution Impedance Manometry (HRIM) is a diagnostic test that uses small transducers that are integrated into a thin catheter to measure lower esophageal sphincter (LES) length, resting pressure, and the ability to relax with swallowing. The contractile strength and coordination of the esophageal body is also measured. A high resolution probe is used to monitor how effective the esophagus can clear swallowed liquids.

**STUDY INDICATIONS**

The common indications for this study are dysphagia, GERD, and non-cardiac chest pain.

**PROCEDURE**

- Explain procedure process to the patient. Make sure the patient has been NPO for 8 hours and aware no sedation will be given. Assure no clothing is restricting the abdomen.
- While the patient is in the sitting position gently insert the probe into patient’s nares, down back of throat into esophagus until probe tip reaches the stomach. A topical anesthetic may be instilled into the nose to make passage of the probe more comfortable. The patient may take sips of water to assist with probe placement.
- Study is performed with the patient recumbent on left side.
- Various measurements are taken while the patient is given 5ml of NSS for ten swallows, followed by 5ml of a viscous challenge medium for ten swallows.
- When the swallows are completed the probe is removed.
- The nurse performs, edits the study and creates a report. The Gastroenterologist interprets the study and provides results to the patient.
- The Nurse plays an integral role in obtaining a complete and accurate study by helping the patient through the test and placement of the probe which causes anxiety.

**REFERENCES:**


**OVERVIEW**

**ABNORMAL ESOPHAGEAL MOTILITY DIAGNOSED BY HRIM**

**Achalasia**
- Medical management is used to relax smooth muscle i.e. calcium channel blockers and nitroglycerin.
- Endoscopic treatments include injection of Botox into LES, this relaxes the muscle. Endoscopic balloon dilation with a specially designed balloon that is used to rupture the LES.
- Surgical treatment -Laparoscopic Heller Myotomy involves precise cutting of the LES to allow it to permanently open, accompanied by a Fundoplication.

**Distal Esophageal Spasm (DES)**
- Avoiding trigger foods often relieves symptoms.
- Medical management is used to control underlying conditions i.e. heartburn, GERD, anxiety, or depression.
- Endoscopic injection of Botox is used to relax the swallowing muscles.

**TREATMENT OPTIONS**

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