Laparoscopic Nissen

Definition:

The definition of Gastro-oesphageal reflux disease has changed over the years. A working definition is the abnormal exposure of gastric content into the oesophagus which result in a symptom complex which include typical symptoms of heartburn and acid regurgitation or extraoesophageal and atypical symptoms such as asthma, laryngitis, epigastric discomfort. These symptoms impede on quality of life.

Indication For Procedure:

Surgical therapy should be considered for the following:

1. Non-compliance of the patient on long term effective medical therapy who wish to be independent from medication
2. Intolerance of PPI (Proton pump inhibitor)
3. Persistent or recurrent oesophagitis despite adequate medical therapy, mainly as a result of volume regurgitation
4. Recurrent peptic stricture in younger patients
5. Complications associated with GORD
6. Barretts' oesophagus remains controversial and cannot be universally recommended

Contraindications:

1. Dysmotility disorders because it would cause greater dysphagia. Patients with motility disorders (e.g. scleroderma etc.) may best served with partial fundoplication.

Pre-Operative Investigations:

It is essential to investigate patients over the age of 45 years with alarm symptoms (dysphagia, retrosternal pain, bleeding).
Morpholical tests are essential to demonstrate the presence of reflux or a hiatus hernia where an operative procedure is planned.

1. Endoscopy. Allows assessment for Barrett's' oesophagus and biopsy. The length of the oesophagus is determined.

2. Barium swallow. Assess complications of reflux disease such as stricturing and shortening.

If there is no evidence of reflux disease and/or the absence of oesophagitis then further investigations are required:

3. 24 hour pH studies – most valuable in the absence of oesophatitis, non erosive reflux disease (NERD)

4. Manometry is used to exclude spastic motility disosders

Pre-op admission days:

Same day admission is acceptable

Theatre Requirements:

Basic laparoscopic camera, monitor/s and insufflation equipment
Laparoscopic instruments
- Atraumatic graspers
- Scissor
- Laparoscopic needle holder
- Energy device e.g. harmonic scalpel

Length of stay (LOS):

1-3 days

Advantages:

As with most minimally invasive procedures there is less pain and analgesic requirement, shorter recovery and earlier return to work. Wound sepsis and incisional hernia rates are lower as compared to open surgery. Improved cosmesis

Complications:

Operative complications

- Establishing a pneumoperitoneum
- Bleeding from solid visceral injury or vascular injury
- Wound Infection
- Hollow visceral injury: Oesophageal perforation 0.1%.
- Pneumothorax 1-5%. An ICD is rarely required.
- Anaesthetic related complication based on ASA risk

Operation specific complication

- Stenosis at fundoplication
- Wrap migration
- Dysphagia which may be transient and occur in 17% of patients and is most likely oedema related and should resolve within 6 weeks. Long term dysphagia may be related to a tight fundoplication, slippage or twisted fundoplication. Anatomic deformity occurs in 1-9% of cases.
- Recurrent symptoms.New symptoms are most likely procedure related
- Gas bloat – difficulty belching, hyperflatulence and abdominal bloating are mostly transient.
- Vagal nerve injury and associated complications.

Level of Care:

General Ward

Ancillary Services:

0

Post Operative Investigations:

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Reviewed By:	E Loots
References:	EAES guidelines for endoscopic surgery. E.A.M. Neugebauer et al. 2006 Christain, D.J. Currrent status of anti-reflux surgery. Surgical Clinics of North America 2005 (85).
Technical recommendations:	The surgeon performing this procedure must be well trained and accredited. The vast majority of patients responds well and remains symptom free if one adhere to strict patient selection and a technically sound operation is performed.