Toupet Fundoplication for the Treatment of GERD

Introduction
There are now two fundoplication surgeries used to treat GERD. The Nissen Fundoplication (NF) historically has been the most common surgical treatment for GERD. It is the most common operation performed by pediatric surgeons. The newer Toupet Fundoplication (TF) has gained attention in providing an alternative form of fundoplication with fewer reported complications.

What are the differences between the Nissen vs. Toupet?
The Nissen Fundoplication is a complete 360 degree wrap with an anti-reflux valve created at the fundus of the stomach. The valve inhibits the regurgitation of gastric contents into the esophagus with a resulting decrease or elimination of GERD.

The Toupet Fundoplication is a partial 270 degree wrap on the posterior side which creates an anti-reflux valve that grows and adapts with the patients. This valve then maintains normal physiologic functioning such as burping and vomiting when necessary.
What are the Complications?

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<tr>
<th>Post Op Complications</th>
<th>GER Recurrence Rates</th>
<th>Repeat Surgery</th>
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</thead>
<tbody>
<tr>
<td>Nissen Fundoplication 4-22%</td>
<td>3-46%</td>
<td>2-14%</td>
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<tr>
<td>Toupet Fundoplication 3-8%</td>
<td>1-25%</td>
<td>2%</td>
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</tbody>
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Postoperative complications include:
- Esophageal, pleural or gastric perforation when performed laparoscopically
- Wound infection
- Pneumonia
- Rupture of the wound
- Dysphagia
- Dumping syndrome
- Retching
- Gasbloat

Is there a difference in outcome in Neurologically Impaired vs. Neurologically Intact patients?
Yes. Patients with neurologic impairment tend to have more post-operative complications and higher GERD recurrence rates while those who are neurologically intact have less complications. It is not known why the outcomes differ in the two patient populations. However, this information can assist in determining the surgical intervention selected.

In a study by Goessler looking at outcomes among patients with neurological impairment following fundoplication surgery found a correlation between the type of fundoplication and the amount of time prior to the recurrence of reflux symptoms. Patients with a Nissen Fundoplication had a higher rate of recurrent GER compared to Toupet Fundoplication patients. However the Nissen patients remained symptom free for a longer period of time than those with a Toupet Fundoplication.

What is the Nurse's role?
With the knowledge of both procedures, benefits and complications, the nurse is able to provide information and answer questions related to the two procedures. Nurses can provide education regarding postoperative complications and necessary care that will be provided if complications appear.
- Wound Care to prevent skin breakdown and infection
- Anticipation of need for blood glucose monitoring and vital signs if dumping syndrome is suspected.
• Request orders for Speech Therapy follow up if dysphagia is present
• Anticipatory guidance for family members to be able to manage complications in the home environment

References: