

Hiatus Hernia and Anti-reflux Surgery



ess

© Mr Bruno Lorenzi MD PhD

Consultant General, Upper GI and Laparoscopic Surgeon
essexsurgeonspecialists.co.uk

HIATUS HERNIA AND ANTI-REFLUX SURGERY

What is pathological gastro-oesophageal reflux?

Pathological gastro-oesophageal reflux is a condition where too much acid from your stomach travels up into your oesophagus (gullet). It is important to understand that it is normal for everyone to have a small amount of acid going into the oesophagus. However, if this happens too often it can cause symptoms and the most frequent is a burning sensation in your chest (heartburn), which at times can reach the back of your mouth. The acid can cause acute or chronic inflammation of the lining (mucosa) of the oesophagus (conditions called reflux oesophagitis, Barrett's oesophagus, etc) and it has even been associated with oesophageal cancer.

Reflux is often associated with hiatus hernia and occasionally para-oesophageal hernia. The oesophagus normally passes through a hole in the diaphragm (muscle which controls the breathing and separates the chest from the abdomen) to reach the abdominal cavity. At the join between the oesophagus and the stomach (GOJ, gastro-oesophageal junction) there is a valve that allows the food to progress but prevents too much acid from travelling up into the oesophagus. Sometimes this valve does not work effectively, causing acid reflux. A hiatus hernia is a condition where the stomach does not lie in its correct position in the abdomen all the time, but the top of the stomach passes through the hole in your diaphragm into the chest. This frequently causes a loss of the valve mechanism and an increased amount of acid in the oesophagus. When the hernia is very large and the majority of the stomach is positioned in the chest (para-oesophageal hernia), reflux can be frequently associated with mechanical symptoms such as difficult swallowing (dysphagia), regurgitation, pain, etc.

Medications that lower the acid content in the stomach are effective at controlling symptoms and healing the inflammation in the oesophagus. The most effective of these medications are called proton pump inhibitors (PPI) and the common names are Omeprazole, Pantoprazole, Lansoprazole and Esomeprazole. Other medications are used for symptomatic reflux and are also very common such as Ranitidine (Rennie) and Gaviscon.

Is anti-reflux surgery for everyone?

You may have been referred to Mr Lorenzi because you are interested in anti-reflux surgery, you would prefer to have an operation than take medications for the rest of your life, you have a large hiatus hernia or because the medications are not working for you.

In the last couple of decades, several progresses have been made in the understanding of the function and physiology of the upper gastro-intestinal (UGI) tract (oesophagus and stomach), and we have discovered that anti-reflux surgery is not for everyone. In the past, many patients complaining of acid reflux were operated on after minimal or no investigations and the result was a significant number of unhappy patients months or years after their surgery. This is because there are many patients who believe they have pathological gastro-oesophageal reflux but in reality, their problem is different and therefore the therapeutic strategy has to be different. In addition, we are more aware of the medium and long-term changes and complications after anti-reflux surgery. Therefore, we can help the patient more in the decision-making process as well as prepare patients better for surgery.

To give a simple example, patients who respond well to the treatment with PPI are usually the ones who have better results after surgery. If your symptoms don't improve significantly with the use of anti-acid medication, there is a strong possibility that you have other problems contributing to your situation. This does not mean that anti-reflux surgery is not for you if Omeprazole doesn't control your heartburn, but it is a possibility or it could be that you remain a suitable candidate for surgery but your expectations have to be different and not all your problems may disappear with surgery.

Mr Lorenzi will not rush to offer you surgery for reflux at your first consultation. He will spend time explaining to you the reasons behind understanding your individual anatomy and function of the UGI tract in order to ascertain if you would be a suitable candidate for this type of surgery and eventually choose and tailor the best surgical technique to your needs.

This often translates in referring you to London for specific tests (high resolution oesophageal manometry, 24 h pH and impedance study and gastric emptying study) to achieve the information necessary.

Mr Lorenzi will spend time with you, usually on more than one occasion, explaining the potential benefits of surgery. He will also inform you of the symptoms which are less likely to improve after the operation. He will inform you about the possible side effects, the chance of recurrence of the hernia or the reflux, the short and long-term risks and complications of this type of surgery.

Mr Lorenzi will give you time to read about anti-reflux surgery, and more importantly make you aware of the possible achievements and the realistic expectations in your specific case.

It is often a fine art to understand the physiology and the function of the UGI tract and plan the most appropriate and suitable treatment for a patient with reflux, taking into account the personality of the patient, the clinical conditions, the symptoms, the evidence from the investigations performed and the realistic expectations of both conservative and surgical treatments.

For a patient undergoing anti-reflux surgery, it is often a choice between a condition of reflux and a new status where the balance between the functions of the UGI tract has changed after surgery. Some of these changes may benefit the patients but others may not. It is important to understand and accept the risk of potential side effects (i.e. bloating) in exchange for an improvement or resolution of the heartburn.

Frequently patients have different problems causing different symptoms and gastro-oesophageal reflux is only one of them. Therefore, correcting the reflux will only improve some of the symptoms, but it won't necessarily improve them all.

The situation is generally different in the presence of a large para-oesophageal hernia where there is a significant mechanical component and the patient experiences symptoms such as dysphagia, regurgitation or chest pain. Anaemia is also frequent in this type of hernia. Correcting the anatomy and repositioning the stomach in its abdominal position usually results in a significant improvement or resolution of the symptoms.

If you are a keen scuba diver, this operation is not for you as you may not be able to go safely under water after surgery.

Especially for this type of surgery, it is your decision to go ahead with the operation or not. It is important that you carefully evaluate the pros and cons of this type of surgery in the short and long term.

How anti-reflux surgery is performed?

The procedure is carried out via keyhole surgery and the most common procedure performed by Mr Lorenzi is the laparoscopic repair of hiatus hernia and Toupet fundoplication. The fundoplication is a wrap of stomach placed around the distal part of the oesophagus in order to create an area of high pressure and prevent stomach acid reflux into the oesophagus. A posterior 270 degree Toupet fundoplication is usually the preference of Mr Lorenzi. Other common types are the anterior 180 degree Dor fundoplication and the 360 degree Nissen fundoplication. The operation takes approximately an hour and a half to two hours and is performed under a general anaesthetic.

The benefits of a keyhole approach are several and include less pain, shorter hospital stay, quicker recovery, less chance of wound infection and better cosmetic result.

Mr Lorenzi has great experience in laparoscopic surgery and has performed many operations for gastro-oesophageal reflux, hiatus hernia and large para-oesophageal hernia. He is a pioneer of 3D technology for keyhole surgery, which greatly improves the magnification and definition of the image during surgery leading to a faster, more precise and accurate procedure. This technology is particularly helpful in this type of surgery facilitating the view and the exposure of tissues and important structures during the operation.

Mr Lorenzi will make a small incision of approximately 1 to 2 cm at your umbilicus (belly button) and gently inflate your tummy with harmless carbon dioxide gas to provide room for the surgery to be performed. He will use a long and narrow telescope camera to look inside your abdomen. He will make four more small cuts in your upper abdomen for retracting the left side of your liver, inserting different instruments and to perform the operation.

Mr Lorenzi will repair your hiatus or para-oesophageal hernia if present, stitching (and in very selected cases with the reinforcement of an absorbable mesh) your diaphragm to reduce the size of the hole your oesophagus passes through and prevent the hernia coming back. He will stitch the top part of your stomach (called fundus) around your lower oesophagus, to form a wrap and produce a zone of high pressure.

Mr Lorenzi uses a special probe to calibrate the wrap so it does not impair your swallowing and has a good valve effect to control the reflux.

How is the recovery after anti-reflux surgery?

Patients are allowed to drink straight after surgery and start soft food the morning after the operation. One night in hospital is usually required to recover fully from the anaesthetic and to allow Mr Lorenzi to assess your swallowing and reflux after surgery. Most patients experience improved control of their reflux straight after surgery.

You will be discharged home on a soft diet for 2 weeks and will be asked to take Lansoprazole Fast Tab 30 mg once a day for the same period of time. After 2 weeks, you can gradually re-introduce solid food and stop the use of PPI.

In the first couple of weeks after surgery, it is preferable to limit gas-forming and irritating foods. These include: green tomatoes, black pepper, caffeine, alcohol, onions, green peppers, chewing gum, menthol, fatty foods, beans, spicy foods, cauliflower, broccoli, nuts, citrus fruits, raw fruits, raw vegetables, and fibre supplements.

You should also avoid breads, crackers, pizza, hard biscuits, pancakes, waffles, and French toast as well as dry meats (such cold cuts) and steak. Carbonated drinks should be also avoided for 2 to 4 weeks.

You should be able to return to work after 2 to 6 weeks, depending on the extent of surgery and the type of work you do. It is advisable to avoid manual work and strenuous physical activities for 6 weeks.

What are the risks of anti-reflux surgery?

We will do our best to make your operation as safe as possible but complications can happen. Some of these are extremely rare but can be serious and can even cause death. You need to know about these potential complications to make an informed decision about surgery. Knowing about whether you are at particular risk of any of these complications will also help us to identify and treat any problem early.

Some of the complications are common to any operation and others are specific to anti-reflux surgery. To summarise:

- There is a small risk of bleeding and in rare cases a blood transfusion may be required.
- There is a risk of infection of the wounds, the surgical site in the abdomen or a chest infection
- There will be some pain and discomfort associated with the surgery. It is also possible to have some pain in your shoulders over the first few hours after surgery due to the irritation of your diaphragm by the gas used during the operation and sometimes a small opening in the pleura. Mr Lorenzi and Dr O'Hara use specific anaesthetic and surgical techniques to reduce the pain and sickness and improve your comfort after surgery (deep neuromuscular blockade, low intra-abdominal pressures and injection of local and regional anaesthetics)
- There will be some scars on the abdomen where the incisions are made and/or a larger scar in the upper part of your abdomen if the surgery is converted to, or performed with, an open technique. The scar fades with time.
- There is a risk of injury to other organs especially if you have a large para-oesophageal hernia. This includes damage to the oesophagus, stomach, intestines, liver, vagus nerves and vessels. This is a rare but potentially serious complication.
- There is a risk of developing hernias at the site of the incisions.
- There is a risk of surgical emphysema (crackling sensation in your skin caused by trapped gas), which usually disappears quickly.
- There is a risk of pneumothorax, where air escapes into the space around your lung. It generally resolves spontaneously but occasionally the air will need to be let out by inserting a tube in your chest (chest drain).
- There is a risk of dysphagia (difficulty in swallowing), which could settle spontaneously if caused by inflammation at the site of surgery, but occasionally may need an endoscopic dilatation or rarely a re-operation. A temporary mild difficulty in swallowing for a few weeks could be normal.
- There is a risk of incomplete control of reflux symptoms, requiring the use of medication again. This is not uncommon and many patients need to use PPI again at some point after surgery.
- There is a risk of abdominal discomfort and bloating. You will probably not be able to burp as usual, which can cause gas to build up in your stomach (gas bloat syndrome) and bowel. You may pass more wind than usual (flatulence).
- There is a risk of needing another open or laparoscopic operation (re-operation) in the event of technical difficulties or complications
- There is a risk of blood clots in the legs (Deep Vein Thrombosis, DVT) which may travel to the lungs (Pulmonary Embolus, PE)

- There is a risk of allergic reaction to the equipment, material or medications
- There is a risk of diarrhoea and loose stools after the surgery. This is usually transient but could last longer in some cases. Mr Lorenzi or your GP could help you prescribing specific medications to control this problem if necessary.

Please remember that different patients have different risks. Mr. Lorenzi will discuss your specific risks with you during your consultation.