Gallstones and Gallbladder Surgery

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GALLSTONES AND GALLBLADDER SURGERY

What are gallstones?

Your gallbladder is a small sac that lies beneath the liver in the right upper part of your tummy. It is joined to the bile duct, a tube that comes from the liver and carries a fluid produced by the liver called bile, which helps break down fatty foods. The gallbladder acts as a pouch and stores some of the bile produced by the liver. It contracts when you eat, and pushes bile down the bile duct into the intestine. The gallbladder is not necessary to maintain good health and once the gallbladder is removed, the bile flows directly from the liver to the intestine and digestion proceeds normally.

Most people are unaware of their gallbladder and experience no symptoms at all throughout their life. However, for the ones who develop gallstones and have symptoms, it is definitely not a nice experience. Gallbladder pain is often described as worse than the labour pain!

Gallstones are solid pieces of stone-like debris formed within the gallbladder. They vary in size, shape and colour. There are various types of gallstones, but the commonest types consist of excess of cholesterol. They are usually associated with a diseased gallbladder that is not functioning properly.

Gallstones are very common, especially in women and overweight people and can run in families. They can gradually enlarge over years, but it is sometimes the small stones that tend to cause more problems.

What problems can gallstones cause? And how do they get diagnosed?

Gallstones can cause one of the following conditions:

- Biliary Colic is the common term used to describe the symptoms that occur when a gallstone temporary blocks the gallbladder. Patients usually suffer sharp pain in the upper area of the tummy (frequently on the right side), which can radiate to the back and right shoulder and is usually associated with nausea, vomiting and indigestion. Cholecystitis occurs when the obstruction caused by the gallstone is prolonged (usually several hours) resulting in inflammation of the gallbladder.

- Choledocholithiasis occurs when one or more stones escape from the gallbladder and become lodged in the main bile duct. It is a dangerous condition and can lead to infection (cholangitis) or blockage (jaundice) of the liver.

- Pancreatitis is the inflammation of the pancreas. It is a very serious condition and can lead to a prolonged admission in hospital. It occurs when a stone obstructs the pancreatic duct.

Gallstones are usually diagnosed with an ultrasound scan. Occasionally other tests may be necessary, such as a MRCP (magnetic resonance cholangiopancreatography), which is a special type of magnetic resonance to look specifically at your bile ducts and pancreas.

How does surgery for gallstones works?

The gallbladder is removed when you have gallstones or inflammation in your gallbladder. The operation is performed to prevent you from having further attacks of pain or complications from the gallstones.

The procedure is performed through keyhole surgery and is called laparoscopic cholecystectomy. It is one of the most common operations performed in the UK and worldwide. It takes approximately 60 to 90 minutes 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 extensive experience in laparoscopic surgery and has performed thousands of gallbladder operations with great success. 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 complex cases facilitating the view and the exposure of intra-abdominal tissues 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 two more small cuts below your right rib margin and one close to the breastbone for inserting different instruments to perform the operation.

Mr Lorenzi will clip and divide the small cystic duct and artery that connect the gallbladder to the liver. Once separated completely from the liver, the whole gallbladder together with its gallstones is removed through the umbilical incision and sent to the laboratory for analysis.

A special x-ray called a cholangiogram will be performed during the operation to ensure stones have not passed into the main bile duct and to ensure correct anatomy before dividing any important structure. This helps to reduce the risk of complications from the surgery (such as major bile duct injury).

If Mr Lorenzi identifies stones within your bile duct and you have given him your consent, he will perform a procedure called common bile duct exploration during the same anaesthetic. He will remove your bile duct stones after making a small incision on the duct (which will be repaired at the end of the procedure) and using a very small and flexible camera (choledocoscope) to look inside the duct and fish the stones out with a small net. Occasionally it is not possible to remove the bile duct stones during the same operation and Mr Lorenzi will organize for you to have another procedure called an ERCP (endoscopic retrograde cholangiopancreatography) to remove them endoscopically.

After surgery, you should be free of pain and able to eat a normal diet. Surgery should also prevent the serious complications that gallstones can cause. Your body will function perfectly well without a gallbladder. On average, patients are back to their normal daily activities a couple of weeks after surgery.

Surgery is recommended as it is the only definitive way to cure gallstones. However, it is your decision to go ahead with the operation or not.

Eating a low-fat diet may help to prevent attacks of pain. Antibiotics can be used to treat any infections of your gallbladder. It is possible to try to dissolve small gallstones using drugs, but these can have side effects and a high failure rate. These alternatives will not cure the condition and your symptoms are likely to come back. There is a risk, even if small, of serious complications caused by gallstones.

Some patients are too old, frail or unfit to undergo a general anaesthetic and cholecystectomy. For these patients the risks of anaesthetic and surgery outweigh the benefits and they will be advised to continue

What are the risks of gallbladder surgery?

We will do our best to make your operation as safe as possible but complications can happen. Some of these can be serious and can even cause death. You need to know about them to make an informed decision about surgery. Knowing about them 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 gallbladder 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. 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)
- Keyhole surgery will leave some scars on the abdomen where the incisions are made and/or a larger scar in the upper part of your abdomen if it is necessary for the surgery to be converted to an open procedure.
- There is a risk of injury to other organs especially if they are stuck to the gallbladder. This includes damage to the stomach, intestine, liver and its vessels.
- There is a risk of injury to the main (common) bile duct that may necessitate further interventions such as endoscopy or surgery.
- There is a risk of bile leakage from a small bile duct or the main bile duct itself. This risk is lower if a cholangiogram is performed at the time of surgery as Mr Lorenzi could be able to identify and repair it.
- There is a risk of developing hernias at the site of the incisions.
- There is a risk of a retained stone in the common bile duct after the surgery or for new stones to form in the duct even though the gallbladder has been removed. This risk is lower if a cholangiogram is performed at the time of surgery.
- There is a risk of the pancreas becoming inflamed by surgery in close proximity and this is called pancreatitis
- There is a risk of needing another open or laparoscopic operation (re-operation) in the event of technical difficulties or complications
- The 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, medications or dye (colourless contrast fluid used to perform the X-ray cholangiogram)
- There is a risk of diarrhoea and loose stools after the surgery. This is usually transient but could last for weeks especially when eating fatty foods 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.