Berwick Colorectal & Surgical Specialists

GALLSTONES

What are gallstones?

Gallstones are small stones which form in the gallbladder. Gallstones develop when the bile that is stored in the gallbladder is too thick.

Where is my gallbladder and what does it do?

The gallbladder is in the right upper side of the abdomen. It is attached to the liver, storing, and concentrating bile. The liver makes bile, which is transported to the bowel by a system of tubes called bile ducts. Bile is a detergent which assists in the digestion of food and is transported into the bowel from the gallbladder by its connection to the bile duct (cystic duct).

What are the symptoms?

Some patients do not have any symptoms at all, and gallstones are found incidentally when a scan is performed for another reason. Symptoms when present include:

- Upper abdominal pain in a "band-like pattern", radiating to the back or right shoulder
- Associated nausea, bloating or vomiting
- Pain after oily, rich or fatty meals

The pain lasts approximately 30 minutes and typically occurs during the evening and at night. Most patients experience multiple episodes of pain. Patients with the above symptoms have biliary colic.

If the pain persists and the gallstones block the cystic duct, then inflammation and infection of the gallbladder occurs. This is known as cholecystitis. Occasionally, the gallstones present in the gallbladder migrate from the gallbladder into the bile duct and obstruct the flow of bile. Obstruction to bile flow for any reason causes jaundice. Infection of the bile ducts is known as cholangitis.

The pancreatic duct joins the bile duct at its opening into the bowel, gallstones that obstruct the pancreatic duct cause pancreatitis and upper abdominal pain.

What tests are required?

Blood tests and ultrasound. Liver function tests may suggest the presence of gallstones in the context of abdominal pain. Ultrasound is the most accurate test for gallstones. Occasionally, your doctor may request an MRI if they are concerned about the presence of gallstones in the bile duct. If gallstones are discovered in your bile duct you may require a specialised procedure using an endoscope placed through your mouth under an anaesthetic to remove them separately (ERCP).

What are the options of management?

Conservative or surgical. Conservative or non-operative options are only recommended in patients who are frail, elderly, have multiple medical problems, asymptomatic or who refuse surgery. The risk of conservative management in symptomatic patients are complications from gallstones such as cholecystitis, pancreatitis and cholangitis and is usually not recommended.

Surgical management is predominantly laparoscopic (keyhole) with removal of the gallbladder and stones (cholecystectomy). There are no recognised alternative treatments in modern medicine. Both the stones and the gallbladder are removed, otherwise the stones will reform. In a laparoscopic cholecystectomy, four small incisions are made with the largest measuring 1-2 cm (depending on the size of the stones). At the time of surgery an x-ray test is performed to check for gallstones in the bile duct and recognise complications earlier. If gallstones are discovered, the surgeon may attempt to remove them concurrently. If this fails or is not possible, then you will require an ERCP and your admission extended. Both the artery and the cystic duct are clipped to assist in the removal of the gallbladder.

Occasionally, the surgery cannot be completed laparoscopically. In that instance, an incision measuring approximately 20-30 cm in length in the right upper part of the abdomen is made. The procedure is like the previous description above.

These notes are intended as a guide and some of the details may vary according to the individual.
Please seek individual advice from your surgeon.

Berwick Colorectal & Surgical Specialists

GALLSTONES

What are the possible complications?

Minor complications from the procedure include infection of the wounds which requires dressings and antibiotic treatment. More significant complications include

- Bile leak: This may occur if a small bile duct is injured or the clips on the cystic duct fall off.
- Bleeding: Major bleeding requiring transfusion or a return to theatre is uncommon.
- Damage to the bowel, liver is rare and will require additional procedures.
- Damage to the bile duct is very rare and serious. If this occurs significant additional procedures are required.

What to expect following your procedure?

Patients who have a laparoscopic cholecystectomy require an overnight admission. You will wake from anaesthesia with dressings over dissolvable sutures. It is anticipated to experience pain at the incision sites and occasionally in the right shoulder from the gas used to perform the procedure. This pain is easily managed with pain killers. It is also not uncommon for patients to experience nausea after their surgery which is controlled with medications. The laparoscopic dressings should remain intact for 4 days. The dressing is waterproof to splashes only. After 4 days, remove them yourself. If you are concerned, see your general practitioner in the interim.

Gentle exercises are encouraged. You may drive if you are able to put your foot on the brake in an emergency or have ceased taking any painkillers. Usually this occurs after 1-2 weeks. Post-operative follow-up usually occurs in two weeks and will be arranged on discharge with your surgeon.

An open procedure will extend your stay from 3-5 days. You will awake from anaesthesia with a dressing over your incision covering dissolvable sutures. It is normal to experience pain from the procedure and require additional painkiller medications. It is also not uncommon for patients to experience nausea after their surgery which is controlled with medications. You will be encouraged to ambulate after surgery and will be discharged from hospital if you are tolerating a diet, able to pass urine, your pain is controlled with painkillers, and you are ambulating independently. The dressing should remain intact for 7 days. The dressing is waterproof to splashes only.

Gentle exercises are encouraged. You may drive if you are able to put your foot on the brake in an emergency or have ceased taking any painkillers. Usually this occurs after 4-6 weeks. Post-operative follow-up usually occurs in two weeks and will be arranged on discharge with your surgeon.