

Gallstones and Gallbladder Surgery

Gallstones are common but usually cause no symptoms. They sometimes cause problems such as pain, jaundice, pancreatitis, and gallbladder inflammation. Surgery to remove the gallbladder is common.

Sources: accessed July 2007

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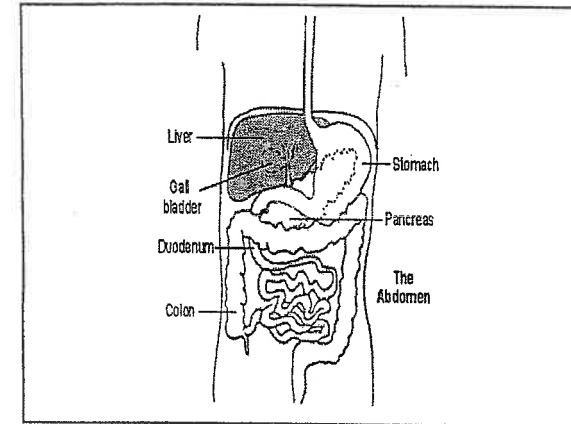
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ACH/2009/009

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Reviewed: July 2007

Understanding the gallbladder and bile



Bile is made in the liver. It is passed into tiny tubes called bile ducts. These join together (like the branches of a tree) to form the main bile duct. Bile constantly drips down the bile ducts, into the main bile duct, and into the gut.

The gallbladder lies under the liver on the right side of the upper abdomen. It is like a pouch which comes off the main bile duct and fills with bile. It is a 'reservoir' which stores bile. The gallbladder contracts (squeezes) when we eat. This empties the stored bile back into the main bile duct. The bile passes along the remainder of the bile duct into the duodenum (the first part of the gut after the stomach).

Bile helps to digest food, particularly fatty foods.

What are gallstones?

Gall is an old English word for what we now call bile.

Gallstones occur when bile, which is normally fluid, forms stones. They commonly contain lumps of cholesterol-like (fatty) material that has solidified and hardened. Sometimes bile pigments or calcium deposits form gallstones. They start as tiny crystals, then grow to resemble gravel and may end up looking like pebbles. Sometimes just a few small stones are formed, sometimes a great many. Occasionally, just one large stone is formed.

About 1 in 3 women, and 1 in 6 men, form gallstones at some stage in their life. They become more common with increasing age. The risk of forming gallstones increases with pregnancy, obesity, and if you take certain medicines. Women have twice the risk of forming gallstones than men. Being vegetarian and drinking a moderate amount of alcohol reduces the risk of forming gallstones.

What problems can gallstones cause?

Usually none

Most people with gallstones do not know they have them. The stones stay in the gallbladder and cause no symptoms. (Because gallstones are common, they are often found when the abdomen is scanned or x-rayed. These tests may be done when looking for the cause of abdominal symptoms. If gallstones are found this does not always mean that they are the cause of symptoms. They may be, but they are sometimes blamed for causing symptoms which are due to other causes.)

Possible problems

About 3 in 10 people with gallstones develop symptoms or problems. These include:

- **Biliary colic:**

This is a severe pain in the upper abdomen. The pain is usually worst to the right-hand side, just below the ribs. It is caused by a stone that gets stuck in the cystic duct. This is the small tube that takes bile from the gallbladder to the bile duct. The gallbladder then squeezes hard to dislodge the stone, and this causes pain. The pain eases and goes if the gallstone is pushed out into the bile duct (which then usually passes out into the gut), or if it falls back into the gallbladder. Pain can last just a few minutes, but more commonly lasts several hours. A severe pain may only happen once in your lifetime, or it may flare up from time to time. Sometimes less severe but niggly pains occur now and then, particularly after a fatty meal when the gallbladder contracts most.

- **Inflammation of the gallbladder:**

This is called cholecystitis. This can lead to infection in the gallbladder. Symptoms usually develop quickly and include abdominal pain, fever, and being generally unwell. You will normally be admitted to hospital and have your gallbladder removed soon if you develop this problem.

- **Jaundice:**

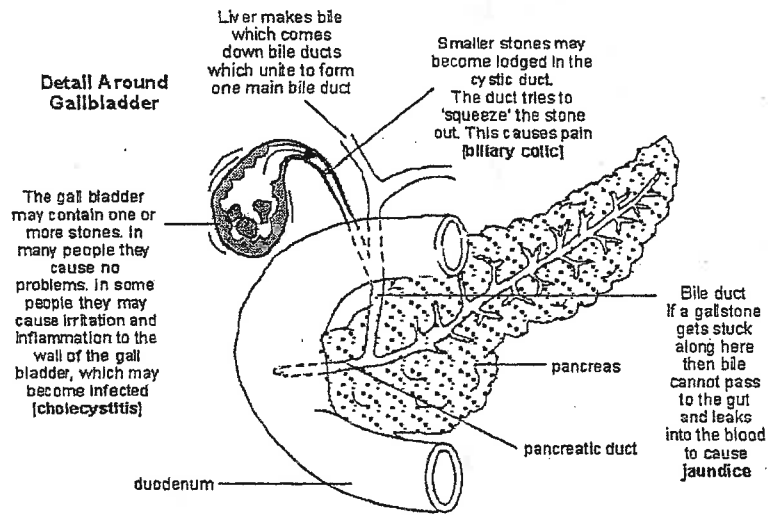
This is an uncommon complication of gallstones. It occurs if a gallstone comes out of the gallbladder, but gets stuck in the bile duct. Bile then cannot pass into the gut, and so seeps into the bloodstream. This causes you to go yellow (jaundiced). The stone may eventually be passed into the gut. However, it is common to need an operation to remove a gallstone which has become stuck in the bile duct. (Note: there are many other causes of jaundice apart from gallstones.)

- **Pancreatitis:**

This is an inflammation of the pancreas. The pancreas makes a fluid rich in enzymes (chemicals which digest food). The pancreatic fluid travels down the pancreatic duct. The pancreatic duct and bile duct join together just before opening into the duodenum. If a gallstone becomes stuck here it can cause pancreatitis which is a painful and serious condition.

- **Other complications:**

Occasionally occur such as severe infection of the bile duct (cholangitis), and other uncommon gut problems.



What are the treatments for gallstones?

No treatment is needed in most cases

It is often best to leave gallstones alone if they cause no symptoms.

Treatment for stones in the gallbladder

An operation to remove the gallbladder is the usual treatment if you have symptoms caused by gallstones. Different techniques to remove the gallbladder may be recommended depending on its site, size, and other factors.

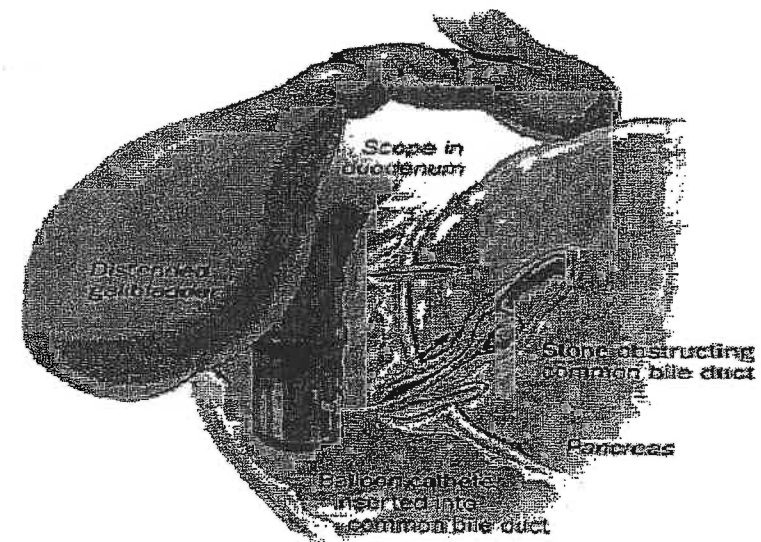
- 'Key-hole' surgery is now the most common way to remove a gallbladder. (This is called laparoscopic cholecystectomy.) This operation only needs small cuts in the abdomen with a small scar remaining afterwards. The operation is done with the aid of a special telescope that is pushed into the abdomen to see the gallbladder. It is not suitable for all people.
- Some people with gallstones need the traditional operation to remove the gallbladder (cholecystectomy).
- Other surgical procedures may be needed if a stone gets stuck in the bile duct

If you decide not to have surgery, you can wait and see what happens to you. You may continue to get bouts of pain but most people with gallstones do not get other complications. A small number of people may get jaundice. Rarely a gallstone can block the pancreas ducts, causing a potentially serious complication of acute pancreatitis. If you are going to choose not to have surgery, do ensure you are aware of the small risk you are running.

Treatment for stones in the common bile duct

There are several different ways that stones in the common bile duct can be diagnosed, and it depends on what the likely treatment is going to be. There is now a trend towards diagnosing and treatment common bile duct stones at the same time as removing the gallbladder and for this all to be done laparoscopically. There are specific situations when stones in the common bile duct are removed before surgery. These include infection in the common bile duct (cholangitis) and severe acute pancreatitis due gallstones. The preferred way to do this is by ERCP.

What is an ERCP?



ERCP means Endoscopic Retrograde Cholangio-Pancreatography, which is a very complicated way of describing a method to remove gallstones from the ducts using an endoscope rather than surgery. The long, flexible endoscope (with a camera) is passed through the mouth and down to the stomach and then on into the duodenum. A tube is passed into the lower end of the bile ducts, and dye is squirted into the ducts and a series of X-rays taken. This dye can be seen on X-ray images. If the images show the presence of stones in the duct, the stones may be retrieved or alternatively the bottom of the duct can be widened to allow the stone to pass naturally. Small drainage tubes (called stents) can also be placed, to allow the bile to flow freely again. This procedure is done by Gastroenterologists, and most patients are sedated rather than anaesthetised. Even though not fully asleep, most patients do not remember the procedure afterwards.

Medication

Taking a medicine is sometimes an option, but usually only for small stones. The aim is to 'dissolve' the stones. This may take years of treatment, and is not always successful. It may be tried in people where surgery is not suitable.

After a gallbladder is removed

You do not need a gallbladder to digest food. Bile still flows from the liver to the gut once the gallbladder is removed. However, there is no longer any storage area for bile between meals. The flow of bile is therefore constant, without the surges of bile that occur from a gallbladder when you eat a meal.

You can usually eat a normal diet without any problems after your gallbladder is removed. However, up to half of people who have had their gallbladder removed have some indigestion or bloating from time to time. This may be more noticeable after eating a fatty meal. Some people notice an increase in the frequency of passing stools (motions or faeces) after their gallbladder is removed. This is like mild diarrhoea. It can be treated by anti-diarrhoeal medication if it becomes troublesome.

What to expect if you are having surgery:

PRE-ADMISSION CLINIC

If you are an out-patient:

This clinic is designed to identify any potential problems that might influence your surgery. It takes approximately 2 hours to complete. During this time you will have blood tests, X-rays, and ECG and may have other tests depending on your medical history and how well you are. You will be seen by a doctor and a nurse who will be able to answer any questions you may have about the surgery.

Please bring all your current medication (including herbal or homeopathic remedies) with you to this appointment.

The type of surgery will be discussed with you at Pre-Admission Clinic.

On the day of surgery:

Please report to reception as indicated in your letter. Do not eat for 4 hours prior to admission, but you may drink clear fluids only until 2 hours before.

If you are an in-patient:

- You will be taken directly to the operating theatre from your ward.
- You will be asked to put on a gown and special compression socks that help to prevent clots forming in your legs.

Types of surgery:

There are 2 types of surgery: Open (the traditional method, with a scar approximately 10-15cm long) or laparoscopic, where a number of small incisions are made to allow the surgeon to operate using a "keyhole" method, using cameras and small instruments.

Occasionally, a surgeon may start a Laparoscopic operation but it may not be possible to complete the surgery this way, so they may then convert to the "open" method.

After the operation:

You will wake up in a recovery ward. Once you're fully awake you will be transferred to a ward overnight. Your blood pressure, pulse and temperature will be monitored overnight. You may have a drip in your arm, but this is not always the case. Sometimes a drain (tubing) is inserted into your abdomen in the form of tubing connected to a bottle. This is removed before you are discharged by a nurse.

Please ask for pain relief if you need it.

Laparoscopic: you may eat and drink as soon as you feel able and you will normally be discharged the day after your surgery.

Open: Oral intake as for laparoscopic procedure. It is important that you get enough analgesia so you can take deep breaths and cough to prevent chest infection.

Potential Complications of Surgery:

Complications of gall bladder surgery are quite rare, but can occur either in hospital, or later at home.

Wound infection: keep your wound(s) clean and dry. Check for redness, pain, swelling or ooze, and see your GP if you are concerned.

Bile Duct injury: Contact your GP if you have persistent or increasing pain, or you notice green/yellow fluid at any wound site.

Deep Vein Thrombosis (DVT): this can develop because of the way you are positioned for the operation. If you notice pain swelling or redness in a calf in the days following surgery, please contact your GP

Going Home:

You may find you feel tired after the surgery, but you should aim to return to full activity as soon as possible. You may shower or bathe as normal. Ensure you dry your wound site(s) carefully. Take pain relief as necessary. Avoid heavy lifting for 6 weeks. If pain persists, contact your GP.