Laparoscopic Cholecystectomy
(Removal of Gallbladder by Keyhole Surgery)

Patient Information
Mr James Francombe, Consultant Surgeon.

Definition
This is an operation to remove the gallbladder. The gallbladder is a small sack like structure (about the size of an egg) that stores the bile which is situated up against the liver just under the edge of the rib cage on the right side. The operation is most commonly performed because stones have formed within the gallbladder but it may be removed for other conditions. Most gallstones do not cause the person any trouble at all. However sometimes they may give you pain particularly after fatty meals. Just occasionally they can go on to give complications such as infection and jaundice and pancreatic problems. Sometimes these complications are serious and may make you very unwell. The only effective treatment is to remove the gall bladder and stone together. Drugs have been tried but found essentially not to work.

Admission
You will be offered an appointment before surgery for routine blood tests and assessment of anaesthetic fitness so that you can be admitted on the day of surgery.

Anaesthetic
Before you go down to the operating theatre you will be seen by an anaesthetist who will discuss the type of anaesthetic most suitable for you.

Operation
This is a major operation. It is usually performed through 3,4 or occasionally 5 small surgical incisions (about 0.5-1 inch long) one very near the navel, one just under the breast bone and the others along the edge of the rib cage on the right. Although the stitches to repair the incisions are dissolvable the incisions do leave small scars. Within the belly cavity the gallbladder has to be cut ftee from its surrounding structures. This is performed using specially designed instruments which pass through the small incisions while I watch on a television screen. The gallbladder is then removed through one of the small surgical incisions. It usually takes about an hour.
Occasionally a drainage tube (about a quarter inch diameter) is left coming out of the belly wall to release blood or excess bile into a bottle. The wounds can be painful for a short while and techniques for helping this pain (such as injecting local anaesthetic whilst you are asleep) will be discussed with you. Patients quite often feel bloated and have pain in the shoulder immediately after the operation. This soon settles.
The advantage of using the keyhole technique is that the amount of pain after the operation seems to be less and the recovery to normal activity is quicker than if the traditional technique is used. As a routine you should expect to stay in hospital only 1-2 days after the operation and be back to normal activity in 7-14 days.

Problems that can occur during the operation
Although every effort is made to identify potential problems before the surgery, unexpected problems may arise. The more common ones are:-

1. Increased technical difficulty.
2. Unexpected or unusual anatomy.
3. Excessive bleeding.

To do this operation via the keyhole method relies on being able to see the gallbladder and its surrounding structures clearly on the TV screen. If it is not clear or there seems to be any danger of damaging other structures for the reasons shown above then the surgeon will not continue with this technique but revert to the more traditional technique of removing the gallbladder. This involves making a surgical incision in the abdomen (belly) through the muscles of the abdominal wall and cutting the gallbladder tree while looking at it directly. This is called *'conversion to open cholecystectomy'.* This happens in between 1 in 12 cases. In some situations it is more likely to happen and the surgeon will discuss this before your operation. If it is necessary to convert to the open method then obviously the benefits of doing the operation keyhole are lost and you will be in hospital for 3-5 days and your recovery
time will be longer. However, it should make no difference as to the success of the operation in terms of curing your symptoms attributable to your gallstones.

Much rarer problems that may necessitate the need for conversion to open operation are:-

1. The disease process is more extensive than expected. This is either dealt with by more extensive surgery or biopsies of other areas may be taken. This is a very rare event and the consequences of this will be fully discussed with you after the surgery.
2. Damage to other structures. When laparoscopic (keyhole) surgery is performed there is a chance that other structures, not visible on the screen, within the belly cavity will be damaged at the time of surgery. This is very rare. (about 1 in 500 chance)

After operation

The evening of your surgery you will be fully awake and able to drink and even eat if you feel up to it. The following morning you should have breakfast and be expecting to go home. Immediately after surgery you will be monitored very closely by the nurses but as your recovery proceeds this monitoring will decrease.

Problems that can occur after the operation (post-operative complications)

The vast majority of patients have no problems at all after the operation. However there are a few rare problems that you need to know about before undergoing the surgery.

In Hospital:-

1. Bleeding
   Although every effort is made to stop bleeding during the operation, there is always some bleeding immediately after the operation and you will be monitored closely in the hours after your operation to be sure you are not bleeding heavily. Very occasionally patients have to be returned to the operating theatre to stop heavy bleeding. This requires the belly cavity to be opened and cannot be done using the TV camera technique. If this happens you may require a blood transfusion.
2. Wound Infection
   The gallbladder that is removed is diseased and sometimes infected. Even though you receive antibiotics during the operation there is a very small chance that one of the wounds will become infected after you have gone home. This will show itself by the wound becoming gradually more painful, by becoming red and/or swollen, or discharging. This is usually easily treated by antibiotics from your GP.
3. Bile Leak
   This is where bile leaks into the body cavity. There are a few reasons why this happens, most of which are not serious. If the bile leak is large then you may need to go back to theatre. Most of the causes of a bile leak can be sorted out using the keyhole method. However, sometimes the abdominal (belly) cavity needs to be opened. Occasionally we ask one of our colleagues to perform an ERCP. This is a procedure, performed through the mouth and gullet, under sedation to help drain the bile duct and reduce the leak.
4. Jaundice
   It is quite common for stones trom the gallbladder to enter the bile duct during the operation. The vast majority of these stones pass without you even noticing. Just occasionally they get stuck and you may experience pain similar to your gall bladder pain. Sometimes jaundice (yellow discolouration of your skin) occurs. It is usually easily resolved with an ERCP procedure (see above) and does not require further surgery.
5. Bile duct damage (**very rare)**
   The bile duct is a fine tube the takes the bile from the liver, where it is made, to the intestine where it mixes with the food and helps digest it. It is about the same diameter as a small drinking straw and about 4 inches long. The gallbladder is right next to, and attached to, the bile duct. Whenever the gallbladder is removed there is an exceptionally small chance (about 1 in 500) that the bile duct will be damaged. Although the chances of this happening are very small, if it does happen it can lead to major illness and require major surgery to correct it. This damage may not be always recognised at the time of the operation and may become evident later.

After discharge

Because your gallbladder was diseased it may not have been working. However if it was working then without it you may find that you have a slight increase in bowel habit until your body readjusts (approx 6 months), this is because of the increased flow of bile. You will not need any special diet unless you have any other illnesses which are treated this way.

Follow up

You will be followed up in clinic approximately 6 weeks postoperatively.