

## **LAPAROSCOPIC CHOLECYSTECTOMY PATIENT INFORMATION**

### **INTRODUCTION**

The gallbladder is a four inch long pouch located under the liver in the right upper abdomen. It is connected to the common bile duct which carries bile from the liver to the duodenum. The gallbladder's normal function is to concentrate bile into a thick syrup. During eating, the bile is ejected out of the gallbladder into the duodenum to aid digestion. In some people the gallbladder becomes diseased and gallstones form from the thickened bile. The bile itself may also be partly to blame, but this is poorly understood. Gallstones cause symptoms when they plug the outlet from the gallbladder or the bile duct. People complain of crampy upper abdominal pain, bloating, nausea and vomiting, and may even develop complications, such as infections, jaundice or pancreatitis. When these complications occur they make treatment more difficult and risky.

### **TREATMENT OPTIONS**

Cholecystectomy, or surgical removal of the gallbladder, has been the treatment of choice because it is a generally safe and permanent cure for gallbladder stones. In the past there have been attempts at using medications to dissolve stones or methods of stone crushing techniques, such as shock wave lithotripsy. Unfortunately, these techniques work in only a fraction of patients, and recurrence of stones is common. Changes in diet or the use of vitamins has not been successful in dissolving gallstones.

Laparoscopic cholecystectomy is our standard technique for complete removal of the gallbladder that greatly reduces postoperative pain, hospitalization time, disability, and cost. During conventional cholecystectomy, the abdomen is opened by cutting a four to six inch incision in the upper abdominal muscle. After surgery, the patient often remains in the hospital on pain medications for two to five days, and may be off of work three to six weeks. There can be no strenuous exercise for at least six weeks. Laparoscopic techniques allow some patients to go home the same day and often return to work within a week.

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Laparoscopic cholecystectomy is much less traumatic. Because the gallbladder is removed with the help of a one-half inch telescopic camera and instruments inserted through several tiny punctures, the procedure can be performed on an outpatient or overnight hospital stay basis. Minimal narcotics are needed and the patient can return to work and full activities in four to ten days. No blood transfusions are necessary. Thus, the laparoscopic approach to cholecystectomy offers total permanent relief of gallbladder stone problems with minimal discomfort and disability, and at greatly reduced hospital cost.

#### DETAILS OF LAPAROSCOPIC CHOLECYSTECTOMY PROCEDURE

Preoperative Care: The patient arrives at the hospital the morning of the procedure on an empty stomach. No bowel preparation is necessary. Lab work has been done during an earlier office visit.

Laparoscopic Cholecystectomy: Under general anesthesia the abdomen is gently inflated with carbon dioxide gas. The expanded space allows room to perform the operation. A one-half inch incision is made in the lower portion of the umbilicus, so that a laparoscope (a thin telescope) can be inserted into the abdominal space. The laparoscope is attached to a video camera, allowing the surgical team to work together watching a magnified TV picture.

Two grasping forceps are then inserted into the right side of the abdomen through one-eighth inch punctures. These forceps are used to position the gallbladder through the remainder of the procedure. Finally, a quarter-inch puncture is made in the mid upper abdomen. A variety of manipulating and cutting instruments can be inserted through this site. The blood vessels to the gallbladder and the cystic duct that attaches the gallbladder to the bile duct are freed of surrounding tissues. A fine tube can be inserted into the bile duct, so that x-rays can identify additional stones that may have migrated from the gallbladder to the bile duct. Next, the cystic duct and blood vessels are closed with surgical clips and cut. The gallbladder is then separated from the liver, using either electrocautery or a laser. The gallbladder, containing its stones, is now free in the abdomen. A grasping forcep is inserted through the laparoscope, so that the narrow end of the gallbladder can be drawn up and out of the abdominal wall at the umbilicus. With the neck of the gallbladder extending through the abdominal wall, the bile and stones are suctioned out, and the deflated gallbladder is drawn out of the abdomen. A single suture is used to close the abdominal wall at the umbilicus and Band-Aids are placed over the puncture sites. The patient is then transferred to the recovery room.

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It should be noted that it may occasionally be necessary to convert the laparoscopic cholecystectomy to an open cholecystectomy. The abdomen would be opened, for instance, if there were marked scarring or inflammation of the gallbladder or if there were technical difficulties with bleeding or proper positioning of the internal organs.

Postoperative Care: Discharge from the hospital may occur following recovery from anesthesia or the next day, depending on how the patient feels and on his home circumstances. Diet consists of liquids for the first 24 hours, followed by regular food when the patient wishes. Removal of the gallbladder does not cause problems with digestion or bowel function. Thus, there are no dietary restrictions. Postoperative pain is described as a stretching soreness of the abdominal wall, occasional referred shoulder pain from the stretching of the diaphragm, and very localized discomfort at the skin puncture sites. A pain shot may be needed immediately after cholecystectomy. Then the patient uses oral pain medication for the next few days. Activity may be increased as the patient desires. Full work and exercise is possible in one week. Finally, the patient may increase his activity to normal during the first week after surgery.