

## Cholecystectomy (Laparoscopic/Open)

### 膽囊切除術(腹腔鏡／開放性)

#### Introduction

- Gallbladder is a sac connected to the biliary tree. It serves the function of concentration and storage of bile for fat digestion.
- Gallstone and acute cholecystitis are common conditions. Removal of gallbladder together with the stones inside (cholecystectomy) is indicated for patients who have symptomatic gallbladder disease e.g. biliary colic, cholecystitis, biliary pancreatitis. Removal of gallbladder will not significantly affect the normal digestive function.
- Symptoms of gallbladder diseases include indigestion, nausea and upper abdominal pain. Severe acute pain with fever in case of infection, e.g. acute cholecystitis

#### The procedure

1. The operation is performed under general anaesthesia
2. The operation could be preformed with Laparoscopic or Open approach
  - a) Laparoscopic cholecystectomy
    - Three to four ports (wound size 0.5 – 1 cm) are introduced through abdominal wall. Operating space created with CO<sub>2</sub> insufflations. Visualization of intra-abdominal organs achieved with video instruments.
    - Success rate 60 – 90%, higher failure rate in acute cholecystitis and contracted gallbladder
    - Conversion to open cholecystectomy if necessary in case of difficulty (10 – 40%)
  - b) Open Cholecystectomy
    - Oblique or vertical wound in upper abdomen
3. Gallbladder resected after ligation of cystic duct and artery
4. If common bile duct stones discovered during operation, measure to deal with the common bile duct stone would be necessary
5. Abdominal drain(s) leave for drainage of fluid if necessary
6. Wound closed with sutures

#### Risks

- A. Anaesthesia related complications:
  1. Cardiovascular complications: myocardial infarction or ischaemia, stroke, deep vein thrombosis, pulmonary embolism, etc.
  2. Respiratory complications: atelectasis, pneumonia, asthmatic attack, exacerbation of chronic obstructive airway disease
  3. Allergic reaction and shock

**B. Procedural related complications: (not all possible complications are listed)**

Common procedure-related complications:

1. Wound infection (5%)
2. Post cholecystectomy syndrome (30%)

Rare but significant complications:

1. Bile duct injury (0.1. - 1%) including bile leakage
  - Higher bile duct injury rate in laparoscopic cholecystectomy ( 0.5 – 1% )
2. Laparoscopic technique related complication
  - e.g. bowel perforation and vascular injury (< 0.1%)
3. Postoperative intra-abdominal bleeding
  - e.g. slipped cystic artery ligature
4. Retained cystic duct stones
5. Port site herniation
6. Adhesive colic or intestinal obstruction
7. Mortality (0.1 - 1%)

**Preoperative preparation**

1. Procedures could be performed as elective or emergency depends on the indicated condition. e.g. emergency for acute cholecystitis
2. Admit 1 day or on the same day for elective cholecystectomy
3. Anaesthetic assessment before procedure
4. Keep fast 6 to 8 hours before operation
5. Change operation room uniform before transferred to operating room
6. Urinary catheterization may be required, otherwise empty bladder before surgery
7. May need pre-medications and intravenous drip
8. Antibiotic prophylaxis or treatment may be required
9. Inform your doctors about drug allergy, your regular medications or other medical conditions

**Postoperative events**

Usually after operation:

1. May feel mild throat discomfort or pain because of intubation
2. Mild discomfort, pain over abdomen, shoulder or neck are common because of gas insufflations. Inform nurse or doctor if pain is severe.
3. Nausea or vomiting are common; inform nurses if severe symptoms occur.
4. Inform nurses if more analgesics are required.
5. Can mobilize and get out of bed 6 hours after operation if no drain or drip
6. Usually go home on the day of operation or 1 to 2 days after the operation for elective laparoscopic cholecystectomy

Wound care:

1. Abdominal drain may be placed for removal of dirty fluid, usually removed on day 2 – 5, depends on the content of fluid drained
2. In the first day after operation, patients can have shower with caution (keep wound dressing dry)

3. Stitches or skin clips (if present) will be taken off around 7 – 10 days

**Diet:**

1. May be restricted from eating or drinking in the initial period
2. Resume diet gradually in the next day as advised by doctor
3. Fluid and fibers are encouraged

**Things to take note on discharge**

1. Contact your doctor or the Accident and Emergency Department if the following events occur
  - increased pain or redness around the wounds
  - discharge from the wound
  - increasing severe abdominal pain
  - fever and chill
  - onset of jaundice
2. Take the analgesics prescribed by your doctor if required
3. Fat intolerance and mild diarrhea may be experienced in first 6 months after operation
4. Resume your daily activity gradually (according to individual situation)
5. Avoid lifting heavy objects in the first 4 weeks
6. Avoid bending or extending the body excessively in the first 4 weeks
7. Remember the dates of taking off stitches/clips in the clinic, and follow-up in the specialist clinic

**Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor.