

## **Patient Information on Endoscopic Ultrasonography Examination**

### **Introduction**

Endoscopic ultrasonography is a technique and endoscopic examination which encompasses both functions of endoscopy and ultrasound. Direct inspection of mucosal surface of the gastrointestinal tract is possible via the endoscopic function. The ultrasound probe at the tip of endoscope allows doctors to study further our internal organs by close proximity with them. Furthermore, doctors can get tissue or cytopathological diagnoses by means of fine-needle aspiration or even tru-cut biopsy under the guidance of endoscopic ultrasound. Hence, it is now widely used in diagnosis of various diseases of the esophagus, stomach, pancreas, gallbladder, liver, colon and lung. Most commonly, it is used for staging of cancer of various organs mentioned above. Patients with gastrointestinal tract cancer, gastrointestinal subepithelial lesion, pancreatitis, pancreatic cancer, biliary obstruction, lung cancer and mediastinal lymphadenopathy etc. should receive endoscopic ultrasound examination. Apart from diagnostic purpose, therapeutic use is also made possible by this method like celiac plexus neurolysis and drainage of pancreatic pseudocysts.

### **The Procedure**

Patients will receive intravenous sedation prior to the examination to reduce any anxiety or discomfort that may arise from the procedure. Local anaesthetic will also be applied to the throat of patients. Then, a flexible endoscope with an ultrasound probe over its tip with a diameter of about 1-1.4cm will be inserted by the endoscopist through the mouth into the gastrointestinal tract. Patients will remain conscious during the procedure. Generally speaking, a diagnostic procedure will last for 15-30 minutes. In complicated cases that require additional therapies or fine-needle aspiration, the procedure time will be prolonged. Patients' co-operation with medical staff will also help shorten the examination time.

### **Risk and Complication**

Minor discomfort including nausea and abdominal distension is common and will resolve with time. Local anaesthetic will cause numbness over throat for about an hour. It may result in difficulty in swallowing. Patients will be advised to resume normal diet about 1 hour later. Major complications including perforation, bleeding and cardiopulmonary events may occur but their risks are less than 1%. Complications specific to endoscopic ultrasound guided fine-needle aspiration or tru-cut biopsy will depend on the site of interest and these include mediastinitis (<1%), pancreatitis (2-3%) and infection (<1%). Complications specific to celiac plexus neurolysis include transient diarrhea (4-15%), transient orthostasis (1%), transient increase in abdominal pain (9%) and abscess formation. In case major complications occur, emergency surgical intervention may be required. Death may also happen if serious complication occurs. Patients should consult the attending physicians for the detail of the endoscopic procedures.

**Before the Procedure**

Patients are required to be fasted for at least 6 hours before the procedure. They should inform the medical staff of any major medical problems like diabetes mellitus, hypertension, valvular heart disease and pregnancy, and continue their medications as instructed. Patients should also provide information concerning their current medications especially anti-platelet and anti-coagulation drugs and any allergic history. Patients should avoid driving to attend the out-patient procedure and also avoid smoking, alcohol drinking and taking sedatives before the procedure. Elderly patients and those with difficulty in walking may be admitted to the hospital for the procedure.

**After the Procedure**

The effect of local anaesthesia will persist for around an hour. Patients should remain fasted until local anaesthesia has worn off. This will prevent choking during food or fluid intake. If intravenous sedation is used, patients should avoid operating heavy machinery, signing legal document or driving for the rest of the day. Patients are advised to enquire about the examination results and date of follow-up. Patients should follow the instruction given by the medical staff in completing the drug treatment.

**Follow Up**

Patients can contact the endoscopy unit within office hours for any discomfort after the procedure, or if they have any question about the examination result and drug treatment. However, if serious event occurs, such as passage of large amount of blood, severe abdominal pain, etc. patients should seek medical advice immediately at the nearest Accident and Emergency Department.

**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.