

Procedure Information Sheet

Introduction

1. EUS combines the functions of endoscopy and high frequency ultrasound examination into one. Apart from ordinary endoscopic examination of the gastrointestinal tract lining, it can also diagnose lesions below the mucosa or in the organs next to the gastrointestinal tract with very high accuracy.
2. Under real time ultrasound monitoring, doctor can perform fine needle aspiration (FNA) to obtain tissue for cytological analysis to confirm the diagnosis, and at the same time perform various therapeutic procedures.
3. After years of research, EUS is now widely used in the diagnosis of diseases of oesophagus, stomach, pancreas, gallbladder and bile duct, liver, colon and lung. In particular, it is useful in diagnosing early cancer and staging of cancer.

Indication

- In patient with upper abdominal pain and unexplained weight loss.
- In patient found to have gastrointestinal submucosal lump in prior endoscopy examination.
- In patient suspected to have biliary obstruction, upper digestive tract cancer, or other gastrointestinal diseases that the causes could not be determined.
- In patient suffering from pancreatic cancer, acute or chronic pancreatitis, or found to have shadow in the pancreas by other imaging techniques.
- In patients who need tissue diagnosis from internal tumour to confirm or exclude malignancy.
- In patient suspected or confirmed to have lung cancer, or found to have abnormal chest (mediastinum) lymph node that require tissue diagnosis to confirm malignancy or metastases.

The Operation / Procedure

1. Prior to the examination, depending on individual patient's condition, intravenous sedative may be given to the patient to alleviate any anxiety and discomfort related to the procedure.
2. For upper digestive tract examination, before the examination, doctor will spray local anaesthetics to the throat of the patient, a mouthguard is given for patient to hold gently in his mouth and it will be spit out by the patient after the examination. Some patients may feel short-term teeth discomfort afterward.
3. Doctor will pass a flexible echoendoscope (endoscope with the ultrasound instrument at the tip) down the mouth of the patient, or use a miniature ultrasound probe to pass through the working channel of a regular endoscope to perform the examination. In complex cases, doctor may use more than one echoendoscope to perform the examination and FNA.
4. In general, the procedure would last for 15 to 30 minutes but in complex cases that require additional therapies, the examination time may be prolonged.

Before the Operation / Procedure

1. A written consent is required.
2. For upper EUS examination, except in special circumstances, patient should fast for at least 6 hours before the examination. It will make the examination safer and facilitate doctor in examining the lining of the digestive tract.
3. Before rectal or colonic EUS examination, patient should only use a low fibre diet (i.e. no grains, nuts) three days before the examination. Only clear fluid is allowed on the day of examination. Consume all laxative as instructed, or else the examination cannot be proceeded.
4. Do not take any valuables or wear any metal jewellery to the hospital.
5. Avoid having any make up or nail polish for it may interfere our medical observations.
6. Patients should inform the medical staff of any major medical problems including diabetes, hypertension and pregnancy, and continue the medications as instructed.
7. Patients should also provide information regarding their current medications especially the use of antiplatelet and anticoagulation drugs and any allergic (including latex) history.
8. Do not drive to the hospital on the day of examination. It is better for the patient to be accompanied by relative or friends to the hospital.
9. Heavy drinking, smoking or use of sedative before the procedure should be avoided.



After the Operation / Procedure

1. Patient should resume diet only after the effect of anaesthetic or sedative has worn off.
2. The medical staff would inform the patient the result of the examination. Patient should follow the instruction given by the medical staff to complete the drug treatment.
3. If patient has received intravenous sedation, the consciousness and thinking ability would be impaired. Therefore, patient should avoid operating heavy machinery or driving for the rest of the day to prevent accident. Also he/she should avoid signing legal document.
4. Patient could contact the attending physician for any discomfort after the procedure, or any question about the examination result and drug treatment.
5. However, if patient has the following conditions such as passage of large amount of blood, severe abdominal pain, or fever, patient should seek medical advice immediately.

Risk and Complication

1. EUS examination is very safe. During the examination, patient may feel minor discomfort including nausea and distension of the stomach.
2. The effect of local anaesthetics would keep the throat numb for around an hour after the procedure which will make swallowing difficult.
3. Some patients may feel short-term teeth discomfort if the mouthguard is given during the examination.
4. At the site of biopsy, minor bleeding can occur but it is usually mild.
5. 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.
6. Other potential and serious complications including bowel perforation, aspiration pneumonia (water occasionally is infused to the stomach for examination), allergic reaction to drug, complications from heart or lung diseases, and infection can happen but they are uncommon. When major complications arise, emergency surgical treatment may be needed and mortality may happen.
7. The complication rate varies with patient's conditions and the complexity of the diagnostic and therapeutic methods performed. Patient should consult the attending physicians for the detail of the endoscopic procedures.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

Smart Patient Website of Hospital Authority: Endoscopic Ultrasonography (5/2021)