



## Introduction

1. Small bowel is a very long organ and it was very difficult to investigate small bowel diseases. Nowadays with the development of single balloon enteroscopy, the problem could be tackled.
2. Single balloon enteroscopy is a new endoscopy system. It has a longer scope length of 2m as compared with ordinary endoscope. The most distinct feature is the overtube that is equipped with an inflated balloon at the tip, which when used together with the scope, could help to advance the scope to the deeper part of the small bowel to perform diagnostic and therapeutic procedure.
3. When perform the examination through both the upper (oral) and lower (anal) gastrointestinal tract routes, it is possible to have a complete examination of the whole small bowel to give a definitive diagnosis for small bowel disease.

## Indication

Patient with the following conditions would need the examination:

- Occult or obscure gastrointestinal bleeding
- Unexplained gastrointestinal tract stricture
- Suspected Crohn's disease (one of the inflammatory bowel disease)
- Suspected small bowel ulceration or protein losing enteropathy
- Suspected small bowel tumour or polyp
- To remove foreign body (such as capsule endoscopy) in the small bowel that causes obstruction
- Previously had a failed colonoscopy examination
- For biliary investigation in patient who had altered anatomy due to prior gastrointestinal surgery

## The Operation / Procedure

1. Prior to the procedure, depending on individual patient's condition, intravenous sedation may be given to the patient to alleviate any anxiety and discomfort related to the procedure.
2. Depends on the indication, doctor would choose to insert the enteroscope through the oral or anal route to perform the examination.
3. During the examination, doctor would use X-ray to monitor the position of the enteroscope.
4. Generally speaking, the procedure may last for 45 to 60 minutes depending on individual patient's condition. In complex cases that require additional therapies, the examination time may be prolonged.
5. For patient safety and security surveillance, all endoscopy rooms are equipped with 24-hour recording CCTV. Video records will be managed according to the principles of Personal Data Privacy Ordinance.

## Before the Operation / Procedure

1. A written consent is required.
2. Before the single balloon enteroscopy examination, patient needs to be fasted for at least 6 hours.
3. If the examination needs to go through the anal route, patient should only be allowed a low fibre diet (i.e. no grains, nuts) three days before the procedure. The night before the examination, patient should only have a light dinner and stop further food intake after 8pm. Patient should follow the instruction by the doctor to drink 2-4 litres of bowel cleaning agent to clear off feces from the bowel, otherwise the examination could not be proceeded. On the day of examination, only clear fluid is allowed.  
If you have sweating, palpitation, severe vomiting, dizziness and abdominal pain after taking the laxative, please stop and inform your doctor or the nurse immediately.
4. Do not take any valuables or wear any metal jewellery to the hospital. Avoid having any make up or nail polish for it may interfere our medical observations.
5. Patients should inform the medical staff of any major medical problems including diabetes, hypertension and pregnancy, and continue the medications as instructed.
6. Patients should also provide information regarding their current medications especially the use of antiplatelet and anticoagulation drugs and history of drug allergy.
7. 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.
8. Heavy drinking, smoking or use of sedative before the procedure should also be avoided.



### After the Operation / Procedure

1. The 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. Minor discomfort including nausea and feeling of abdominal distension is common.
2. The local anaesthetic causes numbness in the throat for around an hour, resulting in difficulty in swallowing.
3. Major complications include perforation, bleeding, cardiopulmonary events, infection, pancreatitis, etc. The complication rate for diagnostic enteroscopy is usually below 1%; however, in cases endoscopic therapy are needed, such as removal of polyp, control of bleeding, dilatation of stricture or placement of stent, the complication rate could be as high as 10%. When major complications arise, emergency surgical treatment may be needed and mortality may happen.
4. 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.
5. The examination procedure will be performed under X-ray monitoring.
6. Female patient should understand that there is a potential risk of radiation induced malformation of the fetus if she is pregnant at the time of the examination. She will be fully responsible for all the consequences if she fails to notify the medical staff of any possibility that she would be pregnant at the time of the examination.

### 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

UpToDate. (2020). Overview of deep small bowel enteroscopy