

# Complications of colonoscopy

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Complications during routine diagnostic colonoscopy are rare when performed by an experienced endoscopist. Extensive diverticulosis, diverticulitis and severe colitis are risk factors for perforation during colonoscopy. In the case of colitis, an unprepared flexible sigmoidoscopy is usually sufficient for diagnostic purposes. Polypectomy is associated with an increased rate of perforation (0.1%) and haemorrhage (0.3%). Immediate haemorrhage can be managed with endoclips or snare-tip coagulation. Delayed haemorrhage may occur 1–14 days post polypectomy and can normally be managed by conservative observation. Transfusion may occasionally be required, and a repeat colonoscopy may be necessary. If recognised at the time of polypectomy, small perforations should be closed using endoclips and the patient may need a period of observation. Symptoms of abdominal pain and cardiovascular compromise after a polypectomy raise the possibility of a delayed perforation and faecal contamination. Patients should be kept nil by mouth and receive intravenous resuscitation and antibiotics. Prompt assessment with a CT scan will often distinguish between a frank perforation and a transmural burn with associated localised peritonitis (the postpolypectomy syndrome). Assessment by an experienced colorectal surgeon is essential, as surgery is often the most appropriate course of action. One disadvantage of conventional endoscopy is that examination is limited to the mucosal surface, and it is not possible to diagnose submucosal or extraintestinal pathology. These limitations can be overcome using EUS, which combines the traditional mucosal image with a separate ultrasound which depicts the intestinal layers and proximate view that clear extraintestinal structures. Its use has revolutionised the staging and management of upper gastrointestinal and hepatobiliary malignancy. There are two main types of echoendoscope: the radial echoendoscope has a radially arranged ultrasound probe and a forward-viewing lens. This is used for diagnostic work such as local tumour staging in the oesophagus and stomach. The linear is a side-viewing scope with a working channel echoendoscope much like an ERCP scope, and a linearly arranged ultrasound probe. This conformation allows ultrasound assessment and ultrasound-guided sampling of tissues to be performed (Figures 9.20 and 9.21). Sampling of paraoesophageal and coeliac lymph nodes and pancreatic, biliary and other solid abdominal lesions as well as drainage of peripancreatic abscesses can be performed. Using TTS Cystotomes or pseudocysts is possible to perform EUS cystgastrostomy and stent placement, and increasingly biliary interventional procedures are being performed with EUS assistance. EUS requires dedicated training, in both scope manipulation. Owing to the width and radiographic interference and lack of flexibility of the endo-ultrasound scope as well as the duration of complex therapeutic procedures, sedation is normally required, and some units perform tests using propofol-based anaesthesia. The main indications for EUS are. All patients undergoing therapeutic EUS listed in Table 9.6 require a normal coagulation

screen. Complications include - oversedation and oesophageal perforation during diagnostic procedures and haemorrhage/perforation during therapeutic procedures.

**Figure 9.19 Malignant colonic obstruction can be palliated or temporarily relieved by insertion of a self-expanding metal stent (arrow). 'Ragged' edge suggesting invasion of adventitia Tumour Muscularis propria**

**Figure 9.20 Endoscopic ultrasound image of an oesophageal tumour invading into the wall.**

**Figure 9.21 Endoscopic ultrasound (EUS)-guided fine-needle aspiration**

tion of a pancreatic head mass. CBD, common bile duct.

Diagnostic Staging of oesophageal/gastric malignancy Staging of hepatobiliary malignancy  
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