

Endoscopy

Endoscopy

Endoscopy is an essential tool with both diagnostic and therapeutic roles. A standard diagnostic upper endoscopy includes the examination of the pharynx, hypopharynx, laryngeal inlet, oesophagus, stomach and part of the duodenum. The risk of the procedure, depending on complexity, is generally low. Extra care should be taken when performing endoscopy for patients with achalasia or obstruction as the oesophagus can be fluid-filled and regurgitation may lead to aspiration. For patients with suspected oesophageal perforation or when the procedure is expected to be prolonged, carbon dioxide should be used for insufflation since it is absorbed more quickly than air. Rigid oesophagoscopy is rarely used nowadays except for unusual circumstances, such as retrieving large or sharp foreign objects. Flexible endoscopy with the use of an overtube is an alternative. Jean Guillaume Auguste Lugol, 1786–1851, physician, Hôpital Saint Louis, Paris, France, suggested that his iodine solution could be used to treat tuberculosis. In patients with significant trismus or obstruction, an ultra-thin endoscope could be used, via either the oral or nasal route, to facilitate the diagnostic or therapeutic procedure. Increasingly ultra-thin endoscopy can be used in an outpatient clinic setting. Image-enhanced endoscopy improves the diagnostic yield and sensitivity of assessment. It should be performed with a high-definition upper gastrointestinal endoscope, equipped with digital image enhancement such as narrow-band imaging (NBI) and magnification. It can be further supplemented by chromoendoscopy, using Lugol's iodine (0.5–1%) to look for any suspicious unstained areas and pink colour sign in squamous neoplasia. Similarly, acetic acid (1–3%) is used to look for any loss of aceto-whitening of the mucosal surface of Barrett's mucosa and neoplasia (Figure 66.7). Endocytoscopy is a novel ultra-high-magnification endoscopic in vivo assessment of lesions technique enabling high-quality with continuous zoom magnification up to 500 times. However, standardised staining methods and endocytoscopic classification are still lacking. With the aid of machine learning and deep learning by artificial intelligence, it is foreseeable that this technique of pattern recognition will greatly improve the sensitivity and specificity of early neoplasia detection and diagnosis.

Figure 66.4 A fluid level (arrows) is apparent in a dilated oesophagus in a patient with achalasia. Figure 66.5 Chest

radiography showing pleural effusion (blue arrows), subcutaneous emphysema (red arrows) and pneumomediastinum (yellow arrows). Figure 66.6 Computed tomography scan showing perforation of the oesophagus secondary to Boerhaave's syndrome. There is pneumo

mediastinum (red arrow), bilateral pleural effusion (blue arrows) and atelectasis of the left lung (orange arrow). A nasogastric tube is in the oesophagus (yellow arrow).

Revision #1

Created 2025-12-31 15:24:26 UTC by Omar Ayman

Updated 2025-12-31 15:24:26 UTC by Omar Ayman