Flexible endoscopy

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Flexible endoscopy is more sensitive than conventional radiology in the assessment of the majority of gastroduodenal conditions, particularly peptic ulceration, gastritis and duodenitis. In upper gastrointestinal bleeding, endoscopy is far superior to any other investigation and o ff ers the possibility of endoscopic therapy . In most circumstances it is the only investigation required. It is generally a safe investigation, but it is important that all personnel undertaking these procedures are adequately trained. Careless and rough handling of the endoscope during intubation of a patient may result in perforations of the phar ynx and oesophagus. Any other part of the upper gastrointes tinal tract may also be perforated. An inadequately performed endoscopy is also dangerous as a serious condition may be curable gastric cancer, the appearances of which ma y often be extremely subtle and may be missed by inexperienced endos - copists. Spraying the mucosa with dy e endoscopically may allow better discrimination between normal and abnormal mucosa, so allowing a small cancer to be more easily seen. In the future, advances in technology may allow ‘optical biopsy’ to determine the natur e of mucosal abnormalities in real time (see Chapter 9). Summary box 67.2 Investigation of gastroduodenal symptoms /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF Upper gastrointestinal endoscopy can be performed with - out sedation, but when sedation is required incremental doses of a benzodiazepine are usually administered. Sedation is of particular concern in the case of gastrointestinal bleeding as it may have a more pr ofound e ff ect on the patient’s car - diovascular stability . It has now become the standard to use pulse oximetry to monitor patients during upper gastrointes - tinal endoscopy , and nasal oxygen is often also administered. Hyoscine butylbromide (Buscopan) is useful to abolish duode - nal motility for examina tions of the second and third parts of the duodenum. Examinations of this type are best carried out using a side-viewing endoscope such as is used for endoscopic retr ograde cholangiopancreatography . Some patients ar e relatively resistant to sedation with ben - zodiazepines, particularly those who are accustomed to drink - ing alcohol. Increasing the dose of benzodiazepines in these patients may not result in any useful sedation, but merely make the patient more restless and confused. Such patients are better endoscoped fully awake using a local anaesthetic throat spray and a narrow-gauge endoscope. Whatever the circumstances, it is important that resuscitation facilities are available includ - ing agents that reverse the e ff ects of benzodiazepines, such as flumazenil. The technology associated with upper gastrointestinal endoscopy is continuing to advance. Instruments that allow both endoscopy and endoluminal ultrasonography to be perfor med simultaneously (see Ultrasonography) are used routinely . Bleeding from the stomach and duodenum can be - treated using a number of haemostatic measures, including - injection with adrenaline (epinephrine), diathermy , heater probes, lasers and clip application.

neuropeptides in the stomach. Function Source Stimulate secretion Gastrin G cells Histamine ECL cells Acetylcholine Neurones Neurones and mucosa Gastrin-releasing peptide CCK Duodenal endocrine cells Inhibit secretion Somatostatin D cells and neurones Secretin Duodenal endocrine cells Enteroglucagon Small intestinal endocrine cells Prostaglandins Mucosa Neurotensin Neurones GIP Duodenal and jejunal endocrine cells PYY Small intestinal endocrine cells Stimulate motility Acetylcholine Neurones 5-HT

Neurones Histamine ECL cell Substance P Neurones Substance K Neurones Motilin Neurones Gastrin G cells Angiotensin Inhibit motility Somatostatin D cells and neurones VIP Neurones Nitric oxide Neurones and smooth muscle Noradrenaline Neurones (norepinephrine) Encephalin Neurones Dopamine Neurones CCK, cholecystokinin; ECL, enterochromaf /f_i n-like cells; G, gastrin receptor; GIP , gastric inhibitory polypeptide; 5-HT, 5-hydroxytrypt amine; PYY , peptide YY; VIP , vasoactive intestinal

peptide. Flexible endoscopy is the most commonly used and sensitive technique Great care is needed to avoid complications and missing important pathology Axial imaging, particularly multislice computed tomography (CT), is useful in staging gastric cancer Endoscopic ultrasonography is the most sensitive technique for evaluation of the ‘T’ stage of gastric cancer and assessment of duodenal tumours Laparoscopy is very sensitive in detecting peritoneal metastases, and laparoscopic ultrasound provides an accurate

evaluation of lymph node and liver metastases

Figure 67.5 Endoscopic ultrasonography of the stomach. Five layers can be identi /f_i ed in the normal stomach. A gastric cancer is shown invading the muscle of the gastric wall (courtesy of KeyMed (Medical and Industrial Equipment Ltd)).

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