Today's Treatment

Diseases of the alimentary system

Pain

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Pain in the alimentary system may be divided into oesophageal pain and abdominal pain.

Oesophageal pain

HEARTBURN

Heartburn is a retrosternal burning sensation, often worse on lying down or bending over and commonly associated with a sour or acid taste in the mouth. The symptom is caused by gastric acid reflux into the oesophagus through an incompetent cardiac sphincter. The diagnosis may be confirmed by a barium meal examination provided the cardiac sphincter mechanism is challenged by various manoeuvres. If the history is suggestive of reflux it is important not to be deterred by a normal barium meal result since the examination may have been inadequate and, in addition, incompetence of the cardiac sphincter may be intermittent.

Treatment consists of important common-sense measures such as removal of tight abdominal garments and appreciable weight reduction when necessary, together with small regular meals and, for nocturnal heartburn, raising the head of the bed. In addition, regular antacid treatment is usually needed, such as 10-15 ml or tablets of alternating magnesium trisilicate and aluminium hydroxide every two hours. More resistant cases may need metaclopramide, 10 mg three to four times a day by mouth. This drug probably increases cardiac sphincter pressure and gastric emptying and is virtually free of side effects. Medication may often be gradually reduced over two to three months. If the symptoms persist or need maximum medication, surgery may be considered, particularly in the presence of a hiatal hernia.

DYSPHAGIA

Dysphagia (pain or difficulty, or both, on swallowing) most commonly occurs in patients with peptic oesophagitis secondary to acid reflux. It is diagnosed for certain by oesophagoscopy with or without the aid of biopsies, but it is important to exclude a peptic stricture in these patients since this indicates a further stage of the disease.

The symptoms may respond to measures described above, but these patients are more likely to need surgery, particularly if a stricture is present and even if it responds initially to dilatation. Dysphagia, however, especially in the absence of preceding reflux, should always be carefully investigated to exclude malignancy.

OESOPHAGEAL SPASM

Classically, oesophageal spasm is a severe retrosternal pain that may last for up to a minute or so but may leave a residual soreness. It may be difficult, however, to differentiate it from cardiac pain, and often it is diagnosed by exclusion after performing chest radiographs and electrocardiograms. Medical treatment is extremely difficult. Smooth muscle relaxants such as amyl nitrite, octyl nitrite, glyceryl trinitrate, and longer-acting nitrates have been tried without much success.

Abdominal pain

ANTERIOR ABDOMINAL WALL

In many patients complaining of abdominal pain it is important to differentiate pain originating in the structures of the abdominal wall from that within the peritoneal cavity. In the former, the patient may give a history of physical strain or the pain may be related to activity or standing and is relieved by resting. A tender area may be located that can be shown to be in the abdominal wall when the patient tenses the abdominal muscles. The possibility of a small ventral hernia must be considered.

Rest and treatment with an analgesic such as paracetamol is often sufficient. In contrast, anterior abdominal wall pain may be associated with a lax abdominal wall and is often considerably helped by an anterior support garment.

UPPER ABDOMINAL PAIN

Upper abdominal pain may originate from the stomach, the transverse colon, or the gall bladder. The clinical differentiation of peptic ulcer from non-organic pain may be difficult.

Peptic ulcer—Classically, peptic ulcer pain is periodic, often waking the patient at night, and is associated with hunger that is partially relieved by meals. The diagnosis is confirmed by a barium meal examination or endoscopy. If both examination results are negative but the symptoms are highly suggestive of peptic ulcer and persist repeat examinations must be performed. Symptoms are often helped by eating something every two hours throughout the day and avoiding large meals, late

suppers, and spicy foods or concentrated alcohol. This, together with regular antacids every two hours throughout the day, with a double dose of 20 ml last thing at night form the basis of medical treatment. Anticholinergics such as poldine or propantheline tablets may be added if symptoms are not controlled. To achieve the desired effect of considerably reducing gastric acid secretion, however, they must be given up to maximally tolerated doses, that is poldine 4 mg up to six times a day. This is assessed by side effects such as dryness of the mouth and blurring of vision and this treatment is contraindicated in patients with prostatism. Since these drugs tend to cause constipation, they are best used with magnesium trisilicate or hydroxide as the antacid.

In chronic gastric ulceration, carbenoxolone sodium, at a maximum dose of 100 mg three times daily, promotes healing of the ulcer. No such evidence exists for chronic duodenal ulceration. Carbenoxolone has major aldosterone-like properties and may thus cause major side effects of salt and water retention, with oedema and kaliuresis with hypokalaemia. It is therefore contraindicated in patients with congestive cardiac failure and hypertension, and patients on this drug must be regularly weighed every other day and examined weekly for side effects. Treatment usually lasts about six weeks.

Non-organic pain—In contrast, constant abdominal pain or discomfort that shows no constant relationship with meals and does not wake the patient at night is likely to be of the so-called non-organic type. This pain is often associated with persistent nausea, abdominal distention, and belching suggesting aerophagy as a cause, and these latter symptoms may be reproduced by gastric distention with air during gastroscopy. On examination, however, the patient may have the same degree of upper abdominal tenderness as a peptic ulcer patient. It is often diagnosed by excluding organic disease, and a follow-up study of a large group of well-investigated patients with "barium-negative dyspepsia" found that less than 2% subsequently developed an organic lesion.

Gall bladder—The only symptom that is definitely associated with gall bladder disease is that of biliary colic. Acute attacks of colicky pain in the right upper quadrant with or without associated dark urine or clinical jaundice are caused by a gall stone in the cystic or bile duct. The waves of pain are severe, inducing sweating, and powerful analgesia such as pentazocine or pethidine are often needed for relief.

In a recent series of patients undergoing cholecystectomy, however, the site of pain (which disappeared postoperatively) varied from the right iliac fossa to the left upper quadrant. Other symptoms such as fat intolerance, nausea, and flatulence are no more frequent than in control populations. At present, the medical treatment of gall stones by dissolution with chenodeoxycholic acid should be carried out only at designated centres.

LEFT-SIDED ABDOMINAL PAIN

Colonic pain may occur anywhere over the distribution of the colon, but the commonest sites are the left iliac fossa and left side of the abdomen, central upper abdomen, and then right and left upper quadrants. Colonic pain is caused by disorders of motility. In young adults this is most commonly caused by the irritable bowel syndrome, in which the main symptoms are pain and early morning diarrhoea, often with a normal bowel action later in the day.

The pain is constant with fluctuations during the day, rarely waking the patient at night, and persisting for years. It is aggravated by many factors such as eating, smoking, stress, or menstruation. Unfortunately, it is usually diagnosed by exclusion necessitating sigmoidoscopy, a barium enema, often additional x-ray examinations, an examination under anaesthesia or dilatation and curettage, and not infrequently negative laparotomy. This results in an undue delay of the correct management, which is first and foremost a sympathetic doctor who understands the nature of the pain, is prepared to explain

it to the patient, and to continue the management over a long period. In addition, a high fibre diet often helps. This may vary from added bran one to three times a day and wholemeal bread to a diet rich in vegetables and salads. Antispasmodics such as mebeverine 100-200 mg four times a day for at least three to six months, may help. Finally, tranquillisers or antidepressants should be used only when clearly indicated.

Diverticular disease—The pain associated with diverticular disease is nearly always localised to the left iliac fossa and is associated with constipation. Both these symptoms respond remarkably to a high fibre diet. In contrast, the pain of acute diverticulitis, which is associated with fever and leucocytosis, needs anticholinergics, antibiotics, and a low residue diet until the attack has subsided.

Acute abdomen—It is beyond the scope of this article to deal with the differential diagnosis of pain associated with the acute abdomen. In the more chronic forms of abdominal pain, however, even when a specific remedy is available it is important to treat the whole patient in terms of his personality and background and always to consider diet, which invariably plays an important part in managing abdominal pain.

CENTRAL ABDOMINAL PAIN

Chronic pancreatitis—Pain associated with chronic pancreatitis is perhaps the most severe form of chronic abdominal pain. Classically it radiates through to the back and may be relieved by sitting forward. It is diagnosed principally by radiology, in which calcification in the region of the pancreas is virtually diagnostic. The results of barium x-ray examinations are disappointing but the newer technique of endoscopic retrograde pancreatography after cannulation of the ampulla of Vater under direct vision is a considerable advance. Unfortunately, after diagnosis, medical treatment has little to offer apart from increasing the strength of the analgesic.

Abdominal angina—Another type of pain in the central abdomen is associated with large as opposed to small meals and sometimes with exercise. Called abdominal angina, it is associated with ischaemia either of the coeliac axis or superior mesenteric artery, and is an important diagnosis to consider. The one doubtful physical sign is that of a loud arterial bruit over the affected artery. Arteriography can show a narrowing of the vessel, and trinitrin sublingually may relieve the pain. If medical measures fail surgery must be considered, but results will depend on the type of lesion, the size of vessel affected, and many other factors.

Further reading

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With the campaign against the use of barbiturates gathering momentum is there a danger that in using substitutes such as nitrazepam and diazepam more extensively contraindications to using these drugs will become increasingly apparent?

Nitrazepam and diazepam are benzodiazepines, all of which have similar actions. They differ from barbiturates in four important respects: they do not easily cause habituation; withdrawal does not cause fits or other serious effects; they are not known to be abused despite their ready availability; and they are weak inducers of hepatic microsomal enzymes (and therefore do not easily interfere with other drugs' actions). Obviously, as with barbiturates, adverse effects may be recognised after 70 years' use, but so far these are not evident. Nevertheless, restraint in the frequency and duration of their use is recommended.