# Chronic mesenteric ischemia

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angina is an uncommon and under recognizedsyndrome caused by repeated episodes of postprandial intestinalischemia. Although it usually does not require emergency therapy, it canlead to marked weight loss and significantly impair the quality of life.Furthermore, there are substantial risks of progressive occlusion or acutethrombosis of one of the involved vessels. Mesenteric artery stenosisseems to be much more common than clinically recognized symptomaticmesenteric ischemia. This probably depends on the development ofextensive collateral circulation, so that stenosis becomes clinicallysignificant only if at least 2 of the 3 major splanchnic vessels (celiac,superior, and inferior) are involved.Most patients with CMI are older than 60 years, and women areaffected three times more often than men. The classical picture is theclinical triad of post-prandial upper abdominal pain, weight loss and anepigastric bruit.Its pathophysiology remains poorly understood. In particular, therelation between symptoms and arterial lesions is unclear. The mostcommon cause of chronic intestinal ischemia is atherosclerotic occlusionor severe stenosis of the mesenteric arteries. A low insertion of the MALor a high origin of the celiac or renal artery may be a cause. Theoccurrence of ischemia may be a multifactorial event determined by thepace of lesion progression, the ability of the individual patient to developcollateral vessels and the site of the lesion.There is no specific diagnostic test, and the diagnosis continues torest on clinical grounds. Conventional angiography is rivaled by highlyaccurate noninvasive imaging modalities such as CTA and MRA.Summary113Ultrasound is an excellent noninvasive means of accurately detectingmesenteric stenosis in CMI. Established criteria for the diagnosis of severstenosis rely on peak systolic velocity, exceeding 275 cm/s for the SMAand 200 cm/s for the celiac artery. CT Angiography in addition to itsminimal invasiveness, CT has 2 other advantages compared withconventional angiography in examining patients with suspected ischemia.(1) It can visualize structures surrounding arteries, detecting ischemicchanges in the affected small bowel loops and mesentery.(2) It can evaluate the etiology of mesenteric ischemia, distinguishingatherosclerotic plaques, thrombus occlusion, or tumor invasion.MRA techniques, particularly contrast-enhanced MRA, haveshown great promise at producing highly detailed images of the proximalmesenteric vasculature. Tonometry is based on a general physiologicalprinciple that during ischemia, anaerobic metabolism leads to increasedproduction of acids, which are buffered locally by bicarbonate ions,leading to increased carbon dioxide tension (PCO2) in the tissue. Erosiveischemic gastric ulcerations and gastro-duodenitis noted on upperendoscopy have been described in association with CMI. Visible

LightSpectroscopy can measure mucosal perfusion in the gastrointestinal tract.Treatment is required for patients with symptomatic CMI. Thegoals of treatment are to ensure symptom resolution, to correct nutritionalstatus and to prevent intestinal infarction. The main factors indetermining the choice of technique are: The type and location of arteriallesions, general status of the patient and experience of the surgeon.Operative intervention via bypass procedures or endarterectomy provideslasting results, but may be associated with considerable postoperativemorbidity and mortality. Endovascular treatment has been advocated forSummary114high-risk patients and for patients with vague symptoms and a doubtfuldiagnosis. Balloon angioplasty is now the method of choice for thetreatment of stenosis of the visceral arteries. Endovascular treatment withangioplasty and/or stenting can be performed with less morbidity, but theresults are not as durable and symptoms recur at a higher rate than withsurgical intervention.