Introduction

Chronic mesenteric ischemia (CMI) secondary to arterial insufficiency was first recognized and described by Chienne in 1869, followed by Councilman in 1894 with anatomic descriptions of celiac and superior mesenteric artery occlusions. Goodman in 1918 followed by Conner in 1933 was the first to associate the symptoms of chronic intestinal ischemia to those similar to coronary angina. The recognition of abdominal angina as a vascular disease representing a precursor to fatal intestinal vascular occlusion was made by Dunphy in 1936. Mikkelson in 1957 was the first to propose a surgical treatment of occlusive lesions of the superior mesenteric artery (SMA). One year later, Shaw and Maynard described the first surgical thromboendarterectomy of the SMA proving its effectiveness in relieving the symptoms associated with chronic mesenteric ischemia. After several decades of open surgical therapy for this disease, Uflacker, Furrer and their colleagues provided the initial descriptions of percutaneous treatment of mesenteric arterial stenosis to relieve the symptoms of CMI ***(Chandra and Baldrich, 2010)***.

There is much confusion regarding the wording used. Synonyms of the terms 'mesenteric', 'visceral', 'intestinal' and 'splanchnic' are used confusingly. Mesenteric is derived from the New Latin word mesenterium and indicates 'any peritoneal membrane that enfolds an internal vertebrate organ and attaches it to the body wall'. Visceral is derived from Mediaeval Latin and means 'pertaining to, or affecting the organs in the cavities of the body'. Intestinal is of New Latin origin and means 'pertaining to, being in, or affecting the lower part of the alimentary canal, extending from the pylorus to the anus'. It is preferred the synonym 'splanchnic', which is derived from the New Latin word splanchnicus and indicates 'pertaining to, or supplying the organs in the cavities of the body'(***Bockel et al., 2001)***.

It is estimated that 1 in 6 people older than 65 years of age have significant atherosclerotic disease affecting the mesenteric arteries. Progression to CMI occurs in less than 7% of these individuals, particularly those with multivessel disease (***Davies et al., 2009)***.

Chronic mesenteric ischemia (CMI) is an uncommon disease that accounts for 2% of the revascularization operations for atheromatous lesions. Autopsy studies have demonstrated splanchnic atherosclerosis as the underlying cause in 35% to 70% of cases ***(Kougias et al., 2007).***

Clinical manifestations of chronic mesenteric ischemia (CMI) can range from vague abdominal pain to debilitating states of intestinal angina resulting in significant weight loss and morbidity. This entity usually occurs in patients over 60y of age with other atherosclerotic symptoms. The rise in an aging population in the coming years could result in an increasing prevalence of chronic mesenteric ischemia (***Penugonda et al., 2009)***.

It is caused by repeated, transient episodes of inadequate intestinal blood flow, usually in relation to the increased metabolic demands associated with digestion ***(Biolato et al., 2010)***.

Diagnosis remains challenging, and most of the patients will undergo an extensive and expensive gastrointestinal tract workup for the above symptoms prior to referral to a vascular service. Several noninvasive diagnostic techniques have been evaluated, including provocative balloon tonometry, pre- and postprandial duplex sonography, magnetic resonance angiography (MRA), and computed tomographic angiography (CTA) ***(Kougias et al., 2007)***.

CT and MR-based angiographic reconstruction techniques have emerged as alternatives for digital subtraction angiography for imaging of splanchnic vessels. Duplex ultrasound is still the first choice for screening

purposes. Recently, gastro-intestinal tonometry has been validated as a diagnostic test to detect splanchnic ischemia and to guide treatment. In single vessel chronic splanchnic disease (CSD), the complication rate is very low, but some patients have ischemic complaints, and can be treated successfully. In multi-vessel stenosis, the complication rate is considerable, while most have chronic splanchnic syndrome (CSS), occurs when ischemic symptoms develop, and treatment should be strongly considered ***(Kolkman et al., 2008).***

Untreated symptomatic CMI can lead to potentially fatal malnutrition or acute intestinal ischemia with infarction of the intestine and mesentery a complication that is associated with a grim prognosis. Therefore, treatment is mandatory for symptomatic patients ***(Loffroy et al., 2009).***

Optimal treatment for patients with CMI remains controversial and challenging. Open surgical revascularization is still considered the standard of care, but may be associated with significant morbidity and mortality. Percutaneous approaches have been suggested to play an increased role in the treatment of CMI because of high initial technical success and low morbidity; however, they have been associated with poor long-term patency and a high rate of recurrent symptoms requiring reintervention ***(Mell et al., 2008)***.

Improvements in stent technology, refinement in technique, and increased efficiency of antiplatelet regimens have, over time, increased the popularity of this minimally invasive approach ***(Kougias et al., 2007).***

Median arcuate ligament syndrome is caused by extrinsic compression of the celiac artery from median arcuate ligament fibrous bands or ganglionic periaortic tissue, or both, in combination with abdominal pain, nausea, vomiting, and nonintentional weight loss. Primarily affect asthenic young women ***(Grotemeyer et al., 2009)***.