I
n the October issue of Vascular Disease Management, Ying Huang, MD, Gustavo S. Oderich, MD, Peter Banga, MD, and Leonardo Reis de Souza, MD of the Mayo Clinic describe the utilization of balloon-expandable covered stents to treat chronic mesenteric ischemia. Dr. Oderich has been a pioneer in the interventional therapy of this disorder.

Chronic mesenteric ischemia typically occurs only with multivessel mesenteric/celiac artery obstruction because there is typically rich collateral flow to the gut. Chronic mesenteric ischemia is distinctly different than acute mesenteric ischemia, which is a true surgical emergency. Patients with chronic mesenteric ischemia often experience progressive unexplained weight loss and postprandial abdominal discomfort (intestinal angina), which may result in “food fear.” These patients often have a presumptive diagnosis of underlying malignancy. There are no definitive physical findings (although abdominal bruits may increase suspicion), and there are no reliable findings by endoscopy. It has been my experience that the overwhelming majority of patients with this problem are undiagnosed. The diagnosis requires a high index of suspicion coupled with ultrasound or angiographic evidence of multivessel involvement. Typically, a true lateral angiographic image of the abdominal aorta is best to demonstrate the disease process that typically is located at the origins of the gut vessels that arise from the anterior surface of the aorta.

Traditionally, chronic mesenteric ischemia has been treated with bypass surgery. Endovascular therapy utilizing balloon angioplasty and stenting is being utilized more commonly by physicians because it has less associated morbidity and is better tolerated in these patients, who are often malnourished and have diffuse atherosclerotic disease involving other organs. Unfortunately, stenting has been associated with a high risk of restenosis, particularly in the celiac artery where the median arcuate ligament may actually crush balloon-expandable stents. Huang et al eloquently describe the indications and the technique they utilize in the endovascular treatment of chronic mesenteric ischemia. They report their experience utilizing polytetrafluoroethylene-covered balloon-expandable stents. In their experience, covered stents had better patency than bare-metal stents. Patency is crucial in mesenteric ischemia because the untreated vessels are most commonly occluded and therefore unable to serve as a source of collateral flow. The authors acknowledge that further study including a randomized controlled trial comparing bare metal and covered stents is warranted to assess efficacy, cost/benefit ratio, and safety.

Postinterventional follow-up of chronic mesenteric ischemia patients is crucial. Recurrent symptoms must be investigated vigorously to look for restenosis and avoid the potentially disastrous complication of acute occlusion. Follow-up abdominal arterial vessel ultrasound is helpful in detecting restenosis and computed tomographic angiography is typically diagnostic.

I believe that the incidence of chronic mesenteric ischemia may be much higher than is traditionally reported. Optimizing interventional outcomes will certainly be multifactorial. Balloon-expandable covered stents may be part of the answer, but other factors, such as perfect sizing, total lesion coverage, protection from distal embolization and contrast-induced nephropathy, and pre- and post-procedural medications, need to be studied. Meticulous follow-up will be mandatory.