Noninvasive screening tools for chronic mesenteric ischemia

Chronic mesenteric ischemia (CMI) is underdiagnosed and increasing in prevalence. Current imaging techniques like computerized tomography angiography (CTA), gadolinium-enhanced magnetic resonance angiography (MRA) can be used to identify stenosis and/or occlusion of the mesenteric vasculature but does not identify the functional degree of ischemia caused by the anatomic lesions. Functional changes in the intestinal slow wave electrical activity may be more sensitive indicators of these conditions. We employ bioelectric and biomagnetic techniques to study functional physiological changes in the intestinal slow wave in response to chronic mesenteric ischemia.