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Upper gastrointestinal scopy sign in chronic mesenteric ischemia

Letter to Editor by

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A 50-year-old male who was a chronic alcoholic for 20 years presented with complaint of abdominal pain for 2 weeks duration. He had complaints of nausea and vomiting since 10 days. There was no history altered bowel habit. He was not a known case of diabetes or hyperthyroidism. On examination patient was afebrile. Abdominal examination showed no significant abnormality except mild epigastric tenderness. On palpations there was no guarding and rigidity. On auscultation bowel sounds were present. Based on above findings clinical diagnosis made as alcoholic gastritis or pancreatitis.

Complete haemogram, renal function test, liver function test and thyroid function test were normal. Amylase (33 U/L) and lipase (29 U/L) levels were normal. Ultrasound abdomen showed normal study. Upper gastrointestinal endoscopy showed hyper peristalsis with oedematous gastric mucosal folds [Figure 1]. Computed Tomography of abdomen showed normal study. He was treated with antiemetic, proton pump inhibitors and other supportive drugs. In spite of above measures patient has persistent symptoms. So we planned for CT angiogram showed features suggestive of chronic mesenteric ischemia [Figure 2]. He was managed with diet modification, anticoagulation, cilastazole and endovascular intervention.

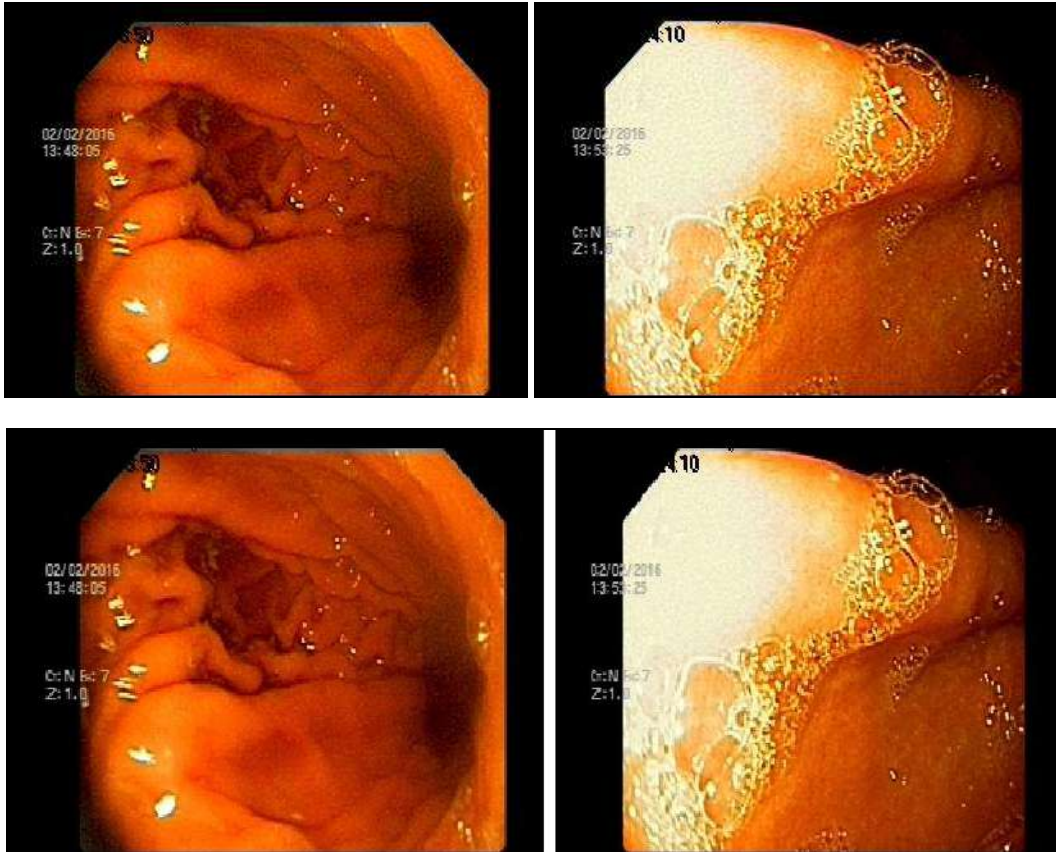
Mesenteric ischemia has post prandial pain starting at 14-30 mins after food intake and last for 1-3 hours. There may be associated history of nausea and vomiting [1]. CT angiogram has significant contribution in the diagnosis of mesenteric ischemia because it can accurately diagnose and other secondary causes of acute abdomen can be excluded. The role of upper gastrointestinal endoscopy in mesenteric ischemia is not negligible. Because it can give clue for the diagnosis of mesenteric ischemia. One of the clues is hyper peristalsis and mucosal edema. There are reports of gastric gangrene in mesenteric ischemia. But hyper peristalsis and oedematous mucosa not reported [2].

The cause of hyper peristalsis and oedematous mucosa probably release of vasodilatation mediators. Splanchnic blood flow is regulated by both vasoconstriction and vasodilation substances. The main vasodilators in gastrointestinal tract are nitric oxide (NO) and prostaglandins. During ischemia there is a release of vasodilatation mediators. NO plays an important role in gastrointestinal motility. It is produced from mast cells, epithelium, smooth muscle and neural plexus. During ischemia there is a release of NO from ischemic tissue. Release of NO causes vasodilatation which causes mucosal edema.

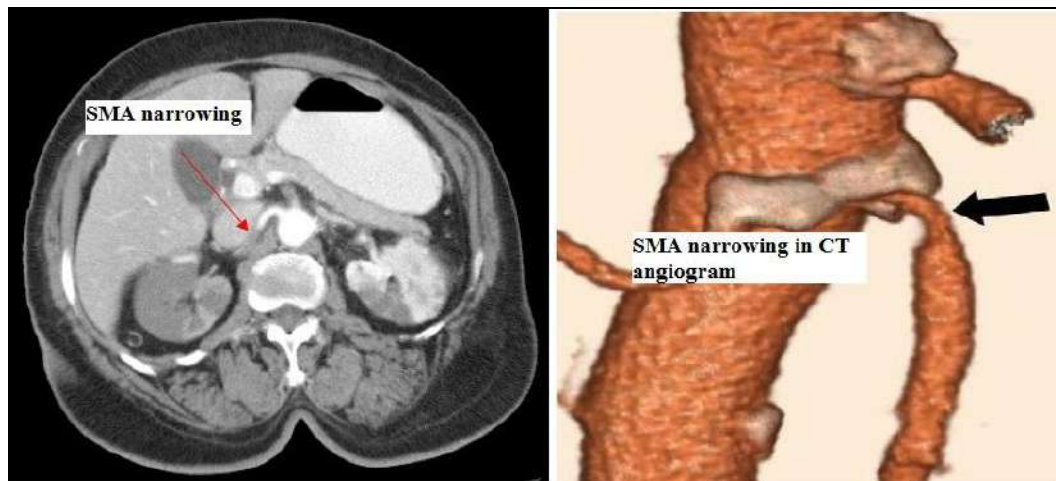
But NO causes reduction in intestinal motility due to inhibition of migratory motor complex [3]. Prostaglandins E and I causes decrease in intestinal motility whereas prostaglandins 2 alpha causes opposite effect. Prostaglandins on distal stomach decrease the amplitude of contractions and in proximal stomach it causes opposite effect. During ischemia there is release of prostaglandins also, which may play a role in hyper peristalsis in stomach [4].

During ischemia there is a release of vasodilatation mediators particularly NO and prostaglandins which may cause mucosal edema and hyper peristalsis in stomach. This may be considered as an important sign in upper gastrointestinal endoscopy in suspected mesenteric ischemia. All patients with obscure cause of abdominal pain with above endoscopy findings suspect mesenteric ischemia.

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Endoscopy shows edematous gastric mucosa with hyper peristalsis



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