Ischemic colitis
Published on 23.09.2007

DOI: 10.1594/EURORAD/CASE.5263
ISSN: 1563-4086
Section: Abdominal imaging
Case Type: Clinical Cases
Authors: Rodriguez Fernández, Paula; Bouzas Sierra, Rosa; Zueco Zueco, Carmen

Patient: 60 years, female

Clinical History:
60-year-old female. Sigma diverticulum surgery performed one month ago. Intense abdominal pain. Acidosis

Imaging Findings:
A 60-year-old female came to emergency services complaining of severe diffuse abdominal pain. An analysis revealed the presence of metabolic acidosis. The patient had undergone diverticulum surgery about one month ago. An ABDOMINAL Angio-CT was performed with CIV in THE ARTERIAL & PORTAL PHASES, where one could see one entire colon wall clearly distended, very fine (like “cigarette paper”) and filled with liquid with respect to the exudative ileus. Furthermore, there were high density punctiform zones indicative of active bleeding. Volume rendering reconstruction was performed and showed proximal stenosis of the inferior mesenteric artery and scarce collateral vessels in Riolan’s arcade and recto sigmoid flexure. The radiological findings and the patient’s surgery antecedents were used to arrive at a probable diagnosis of ischemic colitis. Surgical treatment was initiated with resection of the left colon. Histological analysis of the material sectioned confirmed ischemic colitis. The patient responded well to the treatment and was discharged from hospital.

Discussion:
Ischemic colitis has a physiopathological basis and consists of a reduction of blood flow to the intestine which provokes cellular damage due to lack of oxygen and nutrients. There is an initial alteration of the intestinal mucosa layer and progression of the condition can affect the serous and muscular layers (thereby producing a transmural infarction). The known risk factors amongst others include: colon surgery, low cardiac expense processes, thrombosis and arterial embolus, shock, colic obstruction (bridle, carcinoma...), drugs (antiHT, digoxin, estrogens, AINEs), diabetes, hypercoagulability,... -Clinical symptoms highlight a medium-severe abdominal pain with possible rectal bleeding, sanguinolent diarrhoea as well as hypotension. The presence of metabolic acidosis and leukocytosis in analytical results should alarm for the presence of this pathology. -The key to diagnosis is the rapid performance of an abdominal Angio-CT in the arterial and portal phases. The Angio-CT may show signs of suffering of the intestinal loop (absence of colon wall relief) or loop viability (shown as a contrasting wall). Other frequent findings include: wall swelling with hypercaptation contrast, “thumbprinting”, exudative ileus, oedema of the mesentery, areas of intraluminal hyperdensity with respect to bleeding (secondary to ischemia) and occlusion of the mesenteric vessels. The final stages are intestinal necrosis which may show pneumatosis and gas in the mesenteric vessels. - In the case of this patient, the anastomoses at Südeck’s critical point which are capable of establishing collateral with the rectal plexus were eliminated by secondary resection of diverticulosis. The prior surgery due to acute diverticulitis probably favoured the loss of collateral vessels at the level of Südeck’s critical point, which maintained enough blood flow to the left intestine despite stenosis of the inferior mesenteric artery. The loss of this collateral favours the development of a colon ischemia and the spreading of ischemic colitis beyond the left colon can be explained as due to the liberation of a cascade of vasoactive substances in the bloodstream. The surgical resection of the descending colon provoked a recovery of the remainder of the colon framework. -The ischemic colitis.
prognosis would vary if the wall were affected partially or if it were transmural. About 75% of ischemic colitis are self-limited and just 25% require treatment. -The ischemia treatment, when done partially, can be conservatory in nature. However, if the ischemia is transmural and there is perforation, stenosis symptoms or persistent bleeding, then treatment must be surgical. -A complicated ischemic colitis generally presents a high morbimortality and requires aggressiveness in diagnosis because survival is directly related to ischemic damage. Studies carried out with images do help to make clinical decisions in such situations.

**Differential Diagnosis List:** Ischemic colitis

**Final Diagnosis:** Ischemic colitis

**References:**


Description: ABDOMINAL ANGIO CT in ARTERIAL PHASE: colon wall is dilated, very fine (like cigarette paper) and filled with liquid in relation to exudative ileus. Origin:
**Description:** ABDOMINAL ANGIO CT in ARTERIAL PHASE: there are very high density punctiform zone in colon wall in relation to active bleeding. **Origin:**
Figure 2

Description: VOLUME RENDERING RECONSTRUCTION: proximal stenosis of the inferior mesenteric artery. Origin:
Description: VOLUME RENDERING RECONSTRUCTION: scarce of collateral vessels in Riolan’s arcade and in recto sigmoid flexure. Origin:
Description: ABDOMINAL ANGIO CT in VENOUS PHASE: dilated bowel loops. Colon wall hasn’t contrast captation, is very fine and has hiperdensity zones in relation to active bleeding. Origin: