Chilaiditi syndrome complicated by a sigmoid volvulus and hepatic displacement

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CASE REPORT

A female patient aged 78 years with COPD presented with dyspnea, epigastric pain and a saturation of 86%. A computed tomography (CT) scan showed an obstruction by the sigmoid volvulus which exerted a marked mass effect on the liver, which in turn was displaced towards the left hemi-abdomen. An endoscopic decompression performed by colonoscopy was effective and the patient had a good clinical evolution.

DISCUSSION

Chilaiditi’s sign is an anatomical alteration that consists of the transposition of the small intestine or colon between the liver and the diaphragm. The condition is asymptomatic and is usually an incidental radiological finding. It is a rare entity with an incidence of 0.025% (1) for all radiological examinations. The onset of Chilaiditi syndrome is accompanied by clinical symptoms such as abdominal pain and dyspnea. Moreover, the combination of the sigmoid volvulus and Chilaiditi syndrome is extremely rare, with only 17 previously published cases. The rarity of the aforementioned combination, together with the fact that both conditions share common predisposing factors, suggests a causal association rather than a cause-effect relationship. The factors that favor this association are presumed to include elongation and hypermotility of the colon together with a long mesentery, chronic constipation and prior abdominal surgery (2). The “mobile” liver is an unusual situation where the liver can move in the transversal plane due to the laxity or absence of supporting ligaments (3), which is associated with the conditions described above. Most cases require surgical treatment and endoscopic treatment was successful in this case.

Fig. 1. Abdominal CT scan. Coronal slice. An atypical sigmoid colon can be seen that occupies the entire right flank. The sigmoid volvulus exerts a marked mass effect on the intra-abdominal structures, especially the liver, which is displaced towards the left hemi-abdomen. The wall of the colon structure is thinner, probably due to the marked distension, which exhibits a normal enhancement.

Fig. 2. Abdominal CT scan. Axial slice. A marked distension of the sigmoid colon with thinned colonic walls is noticeable. This results in a significant displacement of the liver towards the left hypochondrium which has caused a complete collapse of the intrahepatic portion of the inferior vena cava.

Fig. 3. Chest X-ray showing the presence of loops of the large intestine between the hepatic silhouette and the right hemidiaphragm, that constitutes the so-called Chilaiditi sign.
REFERENCES

