Pneumatose Intestinal e Aeroportia

Pneumatosis Intestinalis and Aeroportia

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A 75-year-old man with hypertension, dyslipidemia, chronic kidney disease, lung disease and constipation, was hospitalized because of aspiration pneumonia after a stroke that caused dysphagia, motor aphasia and right hemiparesis. No cardiac arrhythmias were identified. During his stay, he developed painful abdominal distension with reduced transit for feces, without vomiting. Biochemical workup was unremarkable except for an increase in inflammatory markers. An abdominal computed tomography (CT) showed aeroportia and pneumatosis intestinalis (PI), suggestive of intestinal ischemia (Fig. 1).

The physiopathogenesis is not completely understood. There are three theories: the mechanical theory, in which luminal gas diffuses into the intestinal wall through a discontinuous mucosa or intrathoracic free air, resulting from alveolar disruption in lung diseases, that diffuses through the mediastinum and perivascular mesenteric space to the intramural space; the bacterial theory, which suggests the access of gas-forming bacteria to the intestinal wall through mucosal disintegration; and the biochemical theory that equates the possibility of increasing hydrogen in the intestinal lumen by carbohydrate fermentation, with gas migration to the intramural space as luminal pressure increases.[1,3]

In this case there seems to be intestinal ischemia associated with diffuse atherosclerosis and contribution of chronic constipation and respiratory infection in a patient with chronic lung disease.

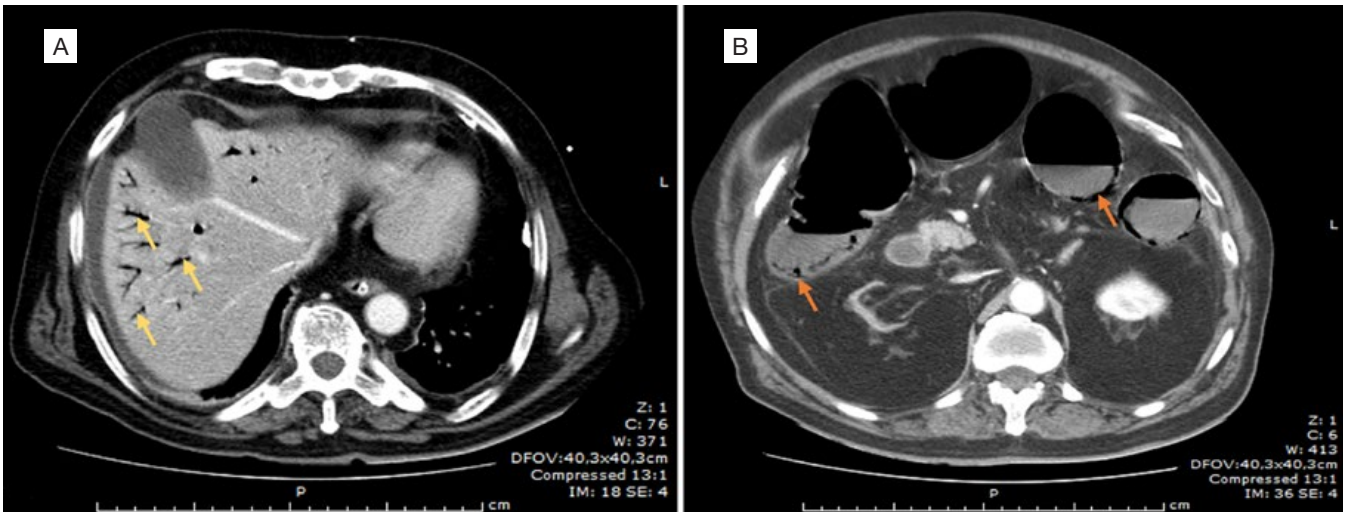

Figure: Panel A: Abdominal CT showing aeroportia (yellow arrows). Panel B: pneumatosis intestinalis (orange arrows) with air-fluid levels in distended loops of bowel

PI is an uncommon entity, characterized by the presence of gas within the wall of the small or large intestine. It may present as an accidental imaging finding or an acute abdominal condition.[1] The presence of concomitant aeroportia (the presence of gas in the portal vein) worsens the prognosis.[2]

Given the poor prognosis and his initial frailty condition, he was considered unfit for the emergent surgery and died 48 hours after diagnosis under symptomatic support treatment.[4]

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JSRM, RRS - Escrita do manuscrito, escolha das imagens e aprovação da versão final.

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REFERENCES

1. Galandiuk S, Fazio VW. Pneumatosis cystoides intestinalis: a review of the literature. Dis Colon Rectum. 1986;29:358–63. doi: 10.1007/BF02554132
2. Abboud B, El Hachem J, Yazbeck T, Doumit C. Hepatic portal venous gas: physiopathology, etiology, prognosis and treatment. World J Gastroenterol. 2009;15:3585-90. doi: 10.3748/wjg.15.3585.
3. Ho LM, Paulson EK, Thompson WM. Pneumatosis intestinalis in the adult: benign to life-threatening causes. AJR Am J Roentgenol. 2007;188:1604-13. doi: 10.2214/AJR.06.1309.
4. Greenstein AJ, Nguyen SQ, Berlin A, Corona J, Lee J, Wong E, et al. Pneumatosis intestinalis in adults: management, surgical indications, and risk factors for mortality. J Gastrointest Surg. 2007;11:1268-74. doi: 10.1007/s11605-007-0241-9.