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Infection with SARS-CoV-2 as a potential achalasia trigger

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Dear Editor,

Achalasia is a chronic esophageal motility disorder with an estimated annual incidence of 1-2 cases per 100,000 people (1), characterized by incomplete relaxation of the lower esophageal sphincter and abnormal peristaltism. The condition results in dysphagia, regurgitation and chest pain. The etiology of idiopathic achalasia remains unknown. From a pathophysiological perspective, it is caused by a loss of inhibitory neurons at the esophageal myenteric plexus. Some viruses, including herpes simplex, human papillomavirus and measles virus, have been reported as triggers, as viral infection may induce an aberrant immune response, which under appropriate genetic and environmental conditions would lead to a loss of esophageal neurons (2).

Case report

We report the case of a 66-year-old male with an uneventful history who was admitted due to progressive dysphagia leading to complete solid and liquid

intolerance during two months. He reported that the condition started after a mild infection with SARS-CoV-2, which might be causally related or a coincidental finding. Initially, a gastroduodenal barium study suggested achalasia, and oral endoscopy was performed, which found no mucosal lesions, only retained food remnants, in the esophagus, which lacked motility. The diagnosis was eventually confirmed by high-resolution manometry, which found aperistaltic waves with panesophageal pressurization, compatible with type II achalasia (Fig. 1). Lower esophageal sphincter motility could not be assessed because of the inability of the probe to pass through. Therapeutic measures included endoscopic treatment such as botulinum toxin injection and pneumatic balloon injection to avert greater invasiveness, while expecting potential regression. Since the patient relapsed after both of these techniques and his performance status was good, he eventually underwent Heller's myotomy surgery with a good clinical outcome.

Discussion

Within the hypothetical viral etiology of idiopathic achalasia, SARS-CoV-2 might be thought of as a potential triggering agent. Other case reports in the literature seemingly support this (3,4). In addition, this virus has been reported as a potential cause of worsening of immune-mediated gastrointestinal disorders, including gastroparesis (5). According to our experience, we suggest that while the viral infection is transient, and once neurons are lost, the resulting motor disorder is likely not reversible. Hence, the therapeutic option should be aimed at achieving the greatest clinical effectiveness according to each patient's health status.

References

1. Oude Nijhuis RAB, Zaninotto G, Roman S, et al. European guidelines on achalasia: United European Gastroenterology and European Society of Neurogastroenterology and Motility recommendations. United European Gastroenterol J 2020;8(1):13-33. PMID: 32213062. PMCID: PMC7005998. DOI: 10.1177/2050640620903213

2. Furuzawa-Carballeda J, Aguilar-León D, Gamboa-Domínguez A, et al. Achalasia an autoimmune inflammatory disease: a cross-sectional study. J Immunol Res 2015;2015:729217. DOI: 10.1155/2015/729217

3. Molano FJ, Zatarain A, Aparicio M, et al. Acalasia secundaria a funduplicatura de Nissen. Posible contribución de la infección por SARS-CoV-2. ASENEM; 2021. Available from: https://asenem.org/index.php/2021/12/01/acalasia-secundaria-a-funduplicatura-de-nissen-y-posible-contribucion-de-la-infeccion-por-sars-cov2/

4. Saldaña G, Ribera R, Ciriza de los Ríos C, et al. SARS-CoV2. Possible acalasia trigger? UEG Week 2021.

5. Song J, Bhuta R, Baig K, et al. COVID-19 infection manifesting as a severe gastroparesis flare: a case report. Medicine (Baltimore) 2021;100(14). DOI: 10.1097/MD.0000000000025467

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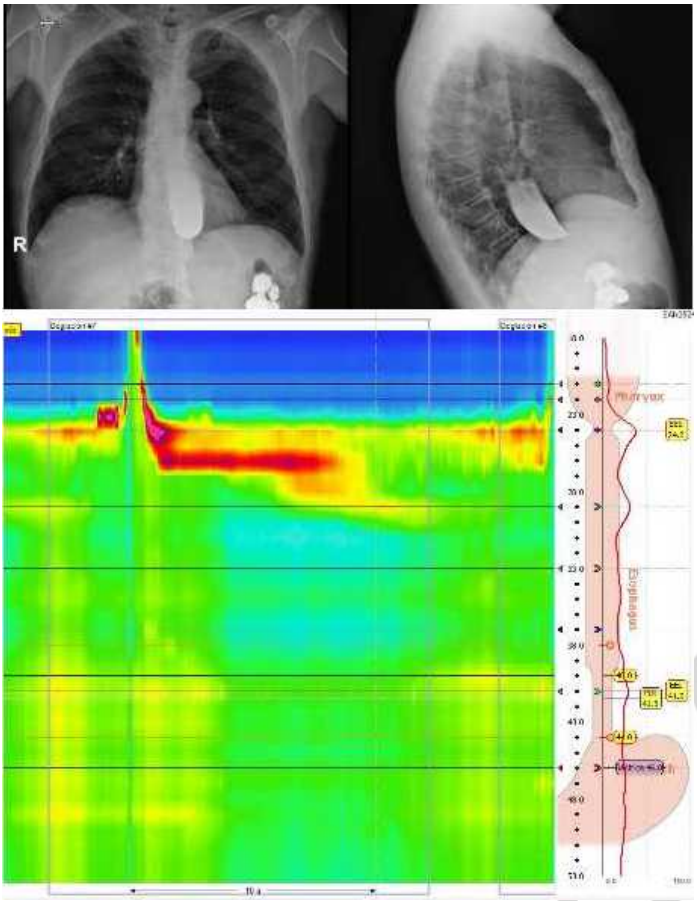

Fig. 1. Postero-anterior and lateral chest x-rays following a gastroduodenal barium study, which showed the absence of passage through the cardia, a tapered narrowing of the distal end and proximal dilation. In the lower figure, high-resolution manometry reveals aperistaltic waves with panesophageal pressurization, consistent with type-II achalasia.