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Pulmonary vein cryoablation - An infrequent cause of gastroparesis

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Dear Editor,

A 74-year-old male with prior history of arterial hypertension and overweight was scheduled for percutaneous pulmonary vein (PV) isolation after the diagnosis of persistent atrial fibrillation (Fig. 1A) causing exertional dyspnea and palpitations. An ambulatory PV cryoablation procedure with a balloon-catheter system (Fig. 1B) was performed and complete PV isolation was successfully achieved.

The patient presented three days later to the Emergency Department with alimentary vomiting that had started the day of the operation and associated abdominal pain and distension. Physical examination revealed the presence of abdominal tympanism and pain on palpation in the epigastrium, without signs of peritonism. Chest and abdominal

X-ray showed marked distension of the gastric chamber and intestinal loops (Fig. 1C). With conservative management, based on absolute diet and prokinetic drugs, the patient showed gradual clinical and radiological improvement (Fig. 1D), and was discharged after seven days of hospitalization, after confirming adequate oral tolerance.

Discussion

Gastroparesis is a rare complication of PV ablation procedures and is caused by the esophageal nerve plexus injury, anatomically related to the inferior PVs (1). Its incidence among patients undergoing PV ablation remains uncertain, although it has been estimated in < 0.5 % of the procedures, and similarly among radiofrequency and cryoablation procedures (2,3). The most common presentation is within the first days after the procedure, although some cases can appear several months after the procedure. The prognosis is usually favorable with conservative management, although in refractory cases, the use of invasive interventions, such as botulinum toxin injection or endoscopic or surgical pylorotomy, might be needed (4).

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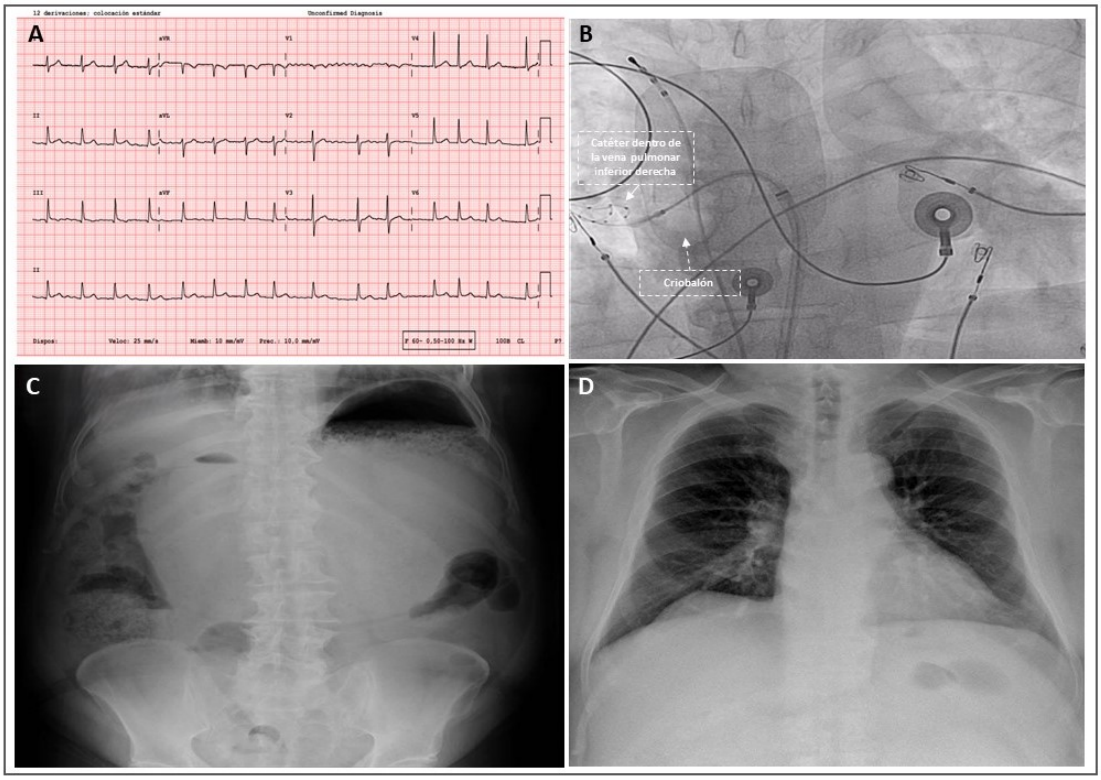

Fig. 1. A. Twelve-lead electrocardiogram of the patient, in atrial fibrillation. B. Fluoroscopy in anteroposterior projection during the procedure, with the cryoballoon inflated in the antrum of the right inferior pulmonary vein (PV). C. Abdominal X-ray in anteroposterior projection showing a large gastric and intestinal distension at the Emergency Department. D. Anteroposterior chest X-ray showing gastroparesis resolution a few days later.