

Clinical Image

Acute Pulmonary Embolism Following Endoscopic Glue Injection for Sclerotherapy<sup>☆</sup>



Embolismo pulmonar agudo tras una inyección sellante endoscópica para escleroterapia

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**Fig. 1.** Axial (A) and coronal (B) computed tomography images showing multiple hyperdense emboli in the pulmonary arteries. Note also in (B) similar findings in the gastric fundus.

A 35-year-old man with Child–Pugh class B hepatic cirrhosis due to primary sclerosing cholangitis presented upper gastrointestinal hemorrhage due to the rupture of gastric varices, as observed on endoscopy. He underwent sclerotherapy with cyanoacrylate, and subsequently developed dyspnea and hemodynamic instability. Computed tomography showed multiple hyperdense emboli in the pulmonary arteries (Fig. 1), consistent with pulmonary embolism caused by cyanoacrylate. Images of the gastric fundus showed similar findings (Fig. 1). Supportive measures were applied and a positive outcome could be achieved.

Cyanoacrylate is widely used in the treatment of bleeding varices, with initial hemostasis ranging from 87% to 100%. The

mixture of cyanoacrylate with lipiodol slows polymerization and assists in visualization during sclerotherapy. Complications, although rare, include infection, esophageal perforation, and embolization. Pulmonary embolism occurs in 1% of cases, but the outcome in these cases is generally positive. Risk factors include rapid injection and large volumes of the mixture, large-caliber varicose veins, and the presence of perisplenic portosystemic shunts. The administration of only 1 ml of the mixture per session is recommended to reduce risks.<sup>1</sup> Anticoagulants and thrombolytics are ineffective, making case management complex. Embolectomy is the alternative in severe cases.

**Conflict of Interests**

The authors declare no conflict of interests.

**Reference**

1. Kazi S, Spanger M, Lubel J. Education and imaging: gastrointestinal: pulmonary embolism of cyanoacrylate glue following endoscopic injection of gastric varices. *J Gastroenterol Hepatol.* 2012;27:1874.

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