Pulmonary Embolism Caused by Histoacryl

Deng-Wei Chou1,2, Keh-Cherng Wey3

An 84-year-old woman had been diagnosed with cirrhosis (Child-Pugh class B) due to hepatitis C, multicentric hepatocarcinoma, and portal vein thrombosis. She was admitted to the intensive care unit because of hemorrhage from gastric fundal varices. Endoscopic injection sclerotherapy (EIS) using histoacryl (N-butyl-2-cyanoacrylate) glue diluted with lipiodol was performed. On the next day, she experienced cough and dyspnea. The oxygen saturation while breathing 2 L/min of oxygen dropped to 84%. Chest X-ray (Fig. 1) showed multiple tubular and nodular radiopaque lesions in both perihilar regions and all lung zones. Previous chest X-ray (Fig. 2) taken 2 days ago did not reveal any abnormality in bilateral lungs. She was treated with supplemental oxygen therapy. Dyspnea decreased and oxygen saturation gradually improved 3 days later.

Fig. 1 Chest X-ray showed (1) multiple tubular and nodular radiopaque lesions in both perihilar regions and all lung zones (thin arrows) and (2) histoacryl in the fundus of the stomach (thick arrow)
When cough, tachycardia, pleuritic chest pain, dyspnea, or hypoxemia develops after EIS with cyanoacrylate, pulmonary embolism (PE) caused by cyanoacrylate is highly suspected. Identification of radiopaque material on chest radiography or non-contrast-enhanced computed tomography of the chest can be used to make the diagnosis\(^1\)\(^3\). PE is uncommonly observed following EIS\(^1\)\(^4\) and appears to be more common in patient receiving a higher volume of cyanoacrylate\(^1\). During EIS for gastric varices, an excess amount of cyanoacrylate may be embolized into the systemic circulation via collateral venous channels such as gastrorenal-splenorenal veins, which are directly connected to gastric varices\(^1\). Affected patients required only symptomatic treatment and there were no direct deaths as a result of pulmonary embolization\(^1\)\(^3\). The multiple radiopaque pulmonary emboli gradually decreased in number, size, and attenuation by the time of the one month follow-up examination\(^1\).

**References**