

Splenic infarction and abscess after endoscopic injection of hypertonic saline-epinephrine solution administered for bleeding gastric ulcer

A 68-year-old woman with diabetes mellitus presented with bleeding from a gastric ulcer that had not been treated previously. Upon admission she was found



Fig. 1 Endoscopy showing a large amount of coagulated blood in the stomach, and bleeding from the open ulcer containing a distinctly visible blood vessel.

to be anemic (red cell count $2.66 \times 10^6/\mu\text{l}$, Hb 8.4 g/dl). Endoscopy revealed a large amount of coagulated blood in the stomach, and bleeding from an open ulcer containing a distinctly visible blood vessel (● Fig. 1). Endoscopic sclerotherapy with hypertonic saline-epinephrine (HSE) was performed. The bleeding stopped with injection of 12 ml HSE. On the day after the initial endoscopic sclerotherapy, the anemia worsened, so repeat endoscopic sclerotherapy was performed. The vessel that was noted in the previous endoscopy was persistent. An additional 27 ml HSE was injected. On day 3 after the second endoscopic sclerotherapy, the patient developed high fever (39°C) with upper abdominal pain. Enhanced computed tomography (CT) showed a large hypodense area in the spleen, characteristic of infarction (● Fig. 2). Intravenous antibiotic therapy was initiated, following which



Fig. 2 Enhanced CT image showing a large hypodense area in the spleen, indicating infarction.

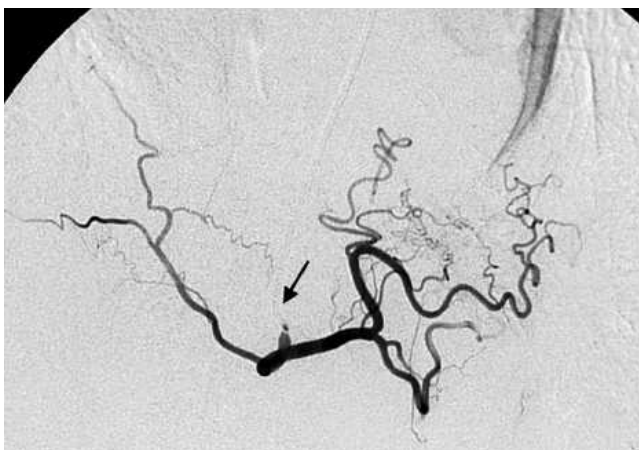


Fig. 3 Arteriogram showing obstruction of the splenic artery (arrow).

the abdominal pain disappeared, but the high fever persisted. On day 13 after admission, arteriography was performed, and the splenic artery was found to be obstructed (● Fig. 3). The high fever continued for more than 7 days; hence, enhanced CT was repeated and revealed a large splenic abscess. A laparotomy was performed. The whole spleen was found to be necrosed and was debrided. The splenic artery was sclerosed by HSE injection, and there was no bleeding from the splenic artery. The postsurgical clinical course was uneventful, and the patient was discharged on day 24 after surgery. To the best of our knowledge, this is the first reported case of splenic infarction and abscess that developed after HSE injection administered for a bleeding gastric ulcer. Splenic infarction and abscess should be considered in a patient with persistent high fever and pain after endoscopic injection therapy. The use of adhesive agents and small amounts of sclerosants and slow injection speed are recommended for endoscopic injection therapy [1].

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