Portal and splenic vein occlusion complicating Histoacryl injection therapy in bleeding gastric varices

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Endoscopic injection therapy with n-butyl-2-cyanoacrylate (NBCA) (Histoacryl®, B. Braun, Melsungen, Germany) is an effective hemostatic treatment for gastric variceal bleeding [1]. In this report we describe a case of portal and splenic vein occlusion after injection therapy with NBCA.

A 48-year-old woman with liver cirrhosis was admitted with fundic variceal bleeding. Endoscopic injection therapy with NBCA was initiated and hemostasis was achieved. Following this treatment, the patient developed ascites and pleural effusion. A computed tomography (CT) scan showed massive ascites and an NBCA embolus in the portal vein (**Fig. 1**). The patient developed renal failure, metabolic acidosis, massive leucocytosis, and an ileus. Intestinal ischemia was suspected.

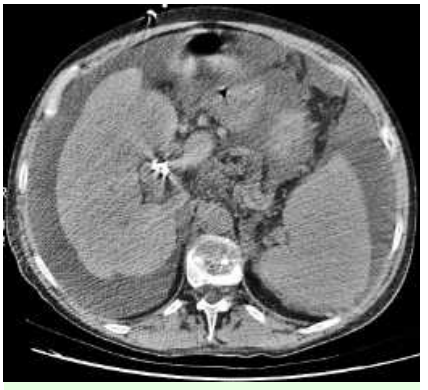

Fig. 1 Computed tomography scan showing n-butyl-2-cyanoacrylate embolus in the portal vein. No intravenous contrast was given because of compromised renal function.

This clinical picture was compatible with an abdominal compartment syndrome. The femoral venous pressure, which can be regarded as a surrogate marker for intra-abdominal pressure, was high (30 mm Hg), supporting the diagnosis of abdominal compartment syndrome. Because of her poor condition and liver cirrhosis it was decided not to perform a laparotomy, and the patient died. Postmortem examination showed an NBCA embolus in both portal and splenic veins. The small bowel was necrotic. No NBCA emboli were found in the mesenteric arteries.

Injection treatment with NBCA in variceal bleeding is effective and relatively safe [1]. Several complications have been reported, among which are pulmonary embolism [2], pericarditis [3], and intra-abdominal arterial embolization [4]. In our patient, the treatment of the bleeding fundic varices was complicated by portal and splenic vein embolization. To our knowledge, this complication has only been described once in the literature [5]. This resulted in tense ascites and pleural effusion, giving rise to an abdominal compartment syndrome. The intestinal ischemia can also be regarded as a result of this syndrome.

Portal vein occlusion following treatment with NBCA, although rare, should be considered in patients who develop massive ascites following this endoscopic intervention.

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