Diffuse intramural duodenal hematoma complicated by lethal necrotizing pancreatitis after endoscopic duodenal biopsy

Fig. 1 Both the abdominal computed tomography images, without contrast (**a**) and with contrast (**b**), disclosed diffuse intramural hematoma (arrows) of the duodenum, extending from the first portion to the fourth portion.

A 17-year-old boy with Hodgkin's lymphoma had been treated with autologous peripheral blood stem cell transplantation. He had evident hematological deficits, with thrombocytopenia ($56\,000 \times 10^9/L$), but with normal coagulation. Due to persistent epigastralgia, panendoscopy was conducted in order to take a gastric biopsy and a duodenal biopsy to exclude graft-versus-host disease after the platelet transfusion. One day later, the boy suffered abdominal pain, fullness, and vomiting. Physical examination demonstrated diffuse tenderness over the upper abdominal quadrant. The hematocrit dropped from 30.8% to 22.6%. Abdominal computed tomography without

(● **Fig. 1 a**) and with contrast (● **Fig. 1 b**) disclosed a diffuse intramural hematoma of the duodenum, extending from the first portion to the fourth portion. This diffuse duodenal intramural hematoma resulted in severe necrotizing pancreatitis with acute respiratory distress syndrome and septic shock. The patient died 2 weeks later.

Duodenal intramural hematoma is a rare condition, and can sporadically be seen in patients with trauma, hematological deficits, or pancreatic cancer, or in those using anticoagulants [1–4]. Iatrogenic trauma caused by either endoscopic duodenal biopsy or therapeutic injection to a bleeding ulcer can also lead to duodenal

intramural hematoma, but is usually self-limited without lethal outcome [4,5]. However, in our patient the duodenal biopsy induced a lethal hematoma: it was diffusely extended from the first to the fourth portion and thus obliterated the pancreatic drainage, leading to severe necrotizing pancreatitis. Evacuation of the hematoma by surgery was limited by the hematological deficits in this case.

Despite the correction of the platelet counts and normal coagulation parameters, this case shows that the risk of mortality from duodenal biopsy still exists. Caution dictates that duodenal biopsy should be avoided during panendoscopy in patients in whom the possibility of surgery is limited by hematological deficits.

Endoscopy_UCTN_Code_CPL_1AH_2AB

P. S. Chen, H. C. Cheng, B. S. Sheu

Department of Internal Medicine, National Cheng Kung University Hospital, Tainan, Taiwan, Republic of China

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DOI 10.1055/s-2007-995736

Endoscopy 2008; 40: E143

© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author

B. S. Sheu, MD

Department of Internal Medicine
National Cheng Kung University Hospital
138 Sheng Li Road
Tainan
Taiwan 70428
Republic of China
Fax: +886-6-2370941
sheubs@mail.ncku.edu.tw