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Case Report

Experience with Duodenal Necrosis

A Rare Complication of Acute Necrotizing Pancreatitis

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Summary

Duodenal necrosis is a rare, but very serious complication of acute necrotizing pancreatitis that most likely is the result of vascular compromise and ischemia of the peri-Vaterian aspect of the duodenal wall. In this article, we present three patients with duodenal necrosis complicating acute necrotizing pancreatitis. The diagnosis was made at the time of necrosectomy. Management options of this challenging complication of necrotizing pancreatitis are discussed.

Key Words: Necrotizing pancreatitis; duodenal necrosis; acute pancreatitis; pancreatic ischemia; duodenal fistula.

Introduction

Necrotizing pancreatitis, the most severe form of acute pancreatitis, is responsible for most of pancreatitis-related morbidity and mortality. Frequently, the necrotic process extends outside the pancreatic parenchyma to involve the peripancreatic tissues directly. Necrosis and perforation of the colon (especially the splenic flexure and transverse colon) and proximal jejunum are somewhat common in severe forms of necrotizing pancreatitis, and pose difficult management problems in themselves *(1–5)*. Necrosis of the duodenum is a rare, but extremely serious complication of necrotizing pancreatitis and has been reported only infrequently *(6–8)*. Because of the challenging problem of management, we discuss our experience with three patients with duodenal necrosis complicating necrotizing pancreatitis and correlate our findings with the limited relevant literature.

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Case 1

A 68-yr-old man with idiopathic acute pancreatitis was transferred to our institution with an APACHE-II score of 19. He was managed in the Intensive Care Unit with hemodynamic and respiratory support. Over the next 2 mo, repeated computed tomographies (CTs) showed increasing peripancreatic fluid, and decreased enhancement of the head, neck, and proximal body of the pancreas. Repeated fine-needle aspirations (FNA) proved culture-negative. A feeding tube was placed fluoroscopically with its tip at the ligament of Treitz. Six days later, a CT demonstrated extraluminal gas and FNA was Gram stain-positive. Fever and leukocytosis were present. At the time of blunt necrosectomy, a 2-cm full-thickness defect was evident in the medial aspect of the second portion of a very thickened and indurated duodenal wall. Primary repair was impossible. A 22-French Malecot catheter was placed into the duodenum through the defect; an