Chapter 53
Necrotizing pancreatitis: staged relaparotomy and open treatment

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Introduction

Necrotizing pancreatitis (NP) is the most severe form of acute pancreatitis (AP) and represents 3–5 % of all patients with AP in tertiary referral centers. A better understanding of the pathophysiology of NP and subsequent superinfection has led to improved treatment modalities and outcomes. Recognition that necrosis of the pancreatic parenchyma and peripancreatic tissues occurs early in the course of the disease [1, 2] has led most pancreatic surgeons to advocate an extensive necrosectomy complimented by various techniques to allow for adequate drainage of the ongoing and residual infection [3, 4, 5, 6]. Our earlier experience with a change from peripancreatic drainage alone to necrosectomy with controlled open lesser sac drainage [7] decreased mortality (44 % to 18 %), but recurrent intraabdominal sepsis necessitating reoperation remained greater than 20 %. In an attempt to improve on this, we changed our approach to primary necrosectomy followed by planned reoperation for repeated necrosectomy/debridement on an every other day basis until all devitalized tissue had been removed, granulation tissue had started forming, and the surgeon was convinced that the necrotizing process was controlled [8]. Then the abdomen was closed in a delayed primary fashion over peripancreatic drains. We recently analyzed our cumulative institutional experience with this technique [9], and here we describe the principal surgeon's individual results.

Material and methods

We prospectively collected data on 39 consecutive patients with NP treated by a single surgeon with necrosectomy, planned reoperation for debridement, and eventual delayed primary closure over drains, between 1985 and 1997. Diagnosis was made with contrast-enhanced computed tomography (CT). Indications for operation included positive cultures from percutaneous aspirates, extraluminal gas on CT, or less commonly clinical deterioration. Only patients with pancreatic or peripancreatic necrosis confirmed intraoperatively were included. Patients were classified according to the recent Atlanta classification of NP [10]. Because most patients were transferred well after the onset of AP, severity was expressed by the APACHE 2 score at the time of arrival at our institution. The etiology, bacteriology, number of reoperations, extent of necrosis, postoperative complications and cause of death were noted. Factors predicting mortality were determined. The long-term endocrine and exocrine pancreatic function, recurrence of pancreatitis or pain, and other related morbidity of patients discharged from the hospital were recorded. Statistical comparisons were made using Fischer's exact test or a chi-square analysis.