Aims: To determine the immediate and long-term results of endoscopic drainage and necrosectomy for symptomatic pancreatic fluid collections.

Methods: The data of 80 patients with symptomatic pancreatic fluid collections (mean diameter: 11.7 cm, range 3–20; pseudocysts: 24/80, abscess: 20/80, infected walled-off necrosis: 36/80) referred for endoscopic management from October 1997 to March 2008 were analyzed retrospectively.

Results: Endoscopic drainage techniques included endoscopic ultrasound (EUS)-guided aspiration (2/80), EUS-guided transenteric drainage (70/80) and non-EUS-guided drainage across a spontaneous transenteric fistula (8/80). Endoscopic necrosectomy was carried out in 49/80 (abscesses: 14/20; infected necrosis: 35/36). Procedural complications were bleeding (12/80), perforation (7/80), portal air embolism (1/80) and Ogilvie Syndrome (1/80). Initial technical success was achieved in 78/80 (97.5%) and clinical resolution of the collections was achieved endoscopically in 67/80 (83.8%), with surgery required in 13/80 (perforation: four; endoscopically inaccessible areas: two; inadequate drainage: seven). Within 6 months five patients required surgery due to recurrent fluid collections; over a mean follow up of 31 months, surgery was required in four more patients due to recurrent collections as a consequence of underlying pancreatic duct abnormalities that could not be treated endoscopically. The long-term success of endoscopic treatment was 58/80 (72.5%).

Conclusions: Endoscopic drainage of symptomatic pancreatic fluid collections is safe and effective, with excellent immediate and long-term results. Endoscopic necrosectomy has a risk of serious complications. The underlying pancreatic duct abnormalities must be addressed to prevent recurrence of fluid collections.

Key words: abscess, drainage, endoscopy, necrosis, pancreatic fluid collection, pseudocyst.

INTRODUCTION

Endoscopic transenteric drainage, especially with endoscopic ultrasound (EUS)-guidance, is now regarded as the technique of choice for the management of symptomatic pancreatic fluid collections, due to a lower morbidity compared to surgery and percutaneous methods, and similar efficacy as surgery.1-2 Surgery remains important in the overall strategy and will have to be considered in the event of complications or unsuccessful endoscopic drainage.

To effectively manage symptomatic pancreatic fluid collections endoscopically, it is important to characterize the nature and extent of the collection, and to recognize and treat the underlying pancreatic duct abnormalities. Pseudocysts may be adequately treated by transenteric drainage, whereas pancreatic necrosis will require more aggressive endoscopic necrosectomy. To prevent recurrent collections, pancreatic duct disruptions, fistulas and strictures require treatment.

The present study examined the immediate and long-term results of endoscopic drainage and necrosectomy in the management of pancreatic fluid collections.

METHODS

Overview of study

This was a retrospective study conducted at the Department of Interdisciplinary Endoscopy, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, in accordance with the Declaration of Helsinki. All patients gave informed consent prior to endoscopic interventions.

Patient selection

All patients who were referred for endoscopic management of symptomatic pancreatic fluid collections during the period from October 1997 to March 2008 were included. Fluid collections were suitable for endoscopic drainage if the following criteria were met: (i) Duration greater 4 weeks; (ii) well-formed wall; (iii) accessible endoscopically; and (iv) located within 1 cm of the duodenal or gastric walls. Exclusion criteria were acute fluid collections, asymptomatic PC and necrosis with minimal liquefaction. Clinical data on patient