Current status on the diagnosis and management of pancreatic cysts in the Asia–Pacific region: Role of endoscopic ultrasound

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Abstract

Endoscopic ultrasound (EUS) and EUS-guided fine-needle aspiration (EUS-FNA) play increasingly prominent roles in the diagnosis and management of pancreatic cysts. The Asian Consortium of Endoscopic Ultrasound was recently formed to conduct collaborative research in this area. This is a review of literature on true pancreatic cysts. Due to the lack of systematic studies, there are no robust data on the true incidence of pancreatic cystic lesions in Asia and any change in over the recent decades. Certain EUS morphological features have been used to predict particular types of pancreatic cysts. Pancreatic cyst fluid viscosity, cytology, pancreatic enzymes, and tumor markers, in particular carcinoembryonic antigen, can aid in the diagnosis of pancreatic cysts. Hemorrhage and infection are the most common complications of EUS-FNA of pancreatic cysts. Pancreatic cysts can either be observed or resected depending on the benign or malignant nature, or malignant potential of the lesions. Guidelines from an international consensus did not require positive cytological findings to be present in their recommendation for resection, which included all mucinous cystic neoplasms, all main-duct intraductal papillary mucinous neoplasms (IPMN), all mixed IPMN, symptomatic side-branch IPMN, and side-branch IPMN larger than 3 cm. In patients with poor surgical risks, EUS-guided cyst ablation of mucinous pancreatic cysts is an alternative. As long-term prospective data on pancreatic cysts are still not available in Asia, management strategies are largely based on risk stratification by surgical risk and malignant potential. Gene expression profiling of pancreatic cyst fluid and confocal laser endomicroscopic examination of pancreatic cysts are novel techniques currently being studied.

Key words

Asia Pacific, diagnosis, endoscopic ultrasound, management, pancreatic cysts.

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Introduction

Asymptomatic cystic lesions of the pancreas are increasingly encountered in today’s clinical practices, probably due to the widespread use of various abdominal imaging modalities, such as ultrasound, computed tomography, and magnetic resonance imaging (MRI). These cysts encompass a wide spectrum of morphological and histopathological types. Broadly, they are classified into two main types: mucinous and non-mucinous, which differ in natural history and clinical characteristics. The non-mucinous lesions include serous cystadenomas (SCA). Mucinous cystic lesions might be benign or malignant in nature and include mucinous cystic neoplasms (MCN) and intraductal papillary mucinous neoplasms (IPMN). The actual prevalence of the various types of pancreatic cysts among different populations and ethnic groups is unknown. Because of the varying potential for malignancy,