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**Pancreatic enzyme replacement for refractory multiple large pancreatic cysts**

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**CASE REPORT**

The case was a 47-year-old male with a long history of alcohol abuse, although he had stopped drinking alcohol after the first attack of acute pancreatitis. He was referred due to recurrent pancreatitis complicated by pancreatic pseudocysts. Computed tomography (CT) and magnetic resonance cholangiopancreatography (MRCP) imaging was suggestive of chronic pancreatitis and pancreatolithiasis, with multiple large pseudocysts in the head and tail of pancreas (Fig. 1A and B). Extracorporeal shock wave lithotripsy (ESWL) was scheduled (1). However, it was cancelled due to the risk of pseudocyst rupture. Endoscopic retrograde cholangiopancreatography (ERCP) was unsuccessful due to the fact that the major papilla was compressed by a large bulging mass (Fig. 1C). Endoscopic ultrasound-guided drainage of multiple large pseudocysts was deemed quite challenging and therefore surgical resection was recommended. However, the patient refused surgery. After a multidisciplinary discussion with radiology experts, the imaging patterns of the CT scan was deemed compatible with pseudocysts, such as no necrosis or debris and no irregular wall or septa within the cysts. Therefore, the

pseudocysts were thought to originate from the main pancreatic duct obstructed by pancreatic stones. To reduce the secretion of pancreatic juice into these pseudocysts, the patient was given high dose pancreatic enzyme of 40,000 IU t.i.d. Six months later, the CT and MRCP showed a spontaneous resolution of most of the pancreatic pseudocysts (Fig. 1D and E). ESWL and ERCP were subsequently performed and the major papilla was easily identified (Fig. 1F) and pancreatolithiasis were easily removed.

## DISCUSSION

This is the first case of spontaneous resolution of multiple large pseudocysts by pancreatic enzyme replacement. The possible mechanism of action is the negative feedback regulation of the exogenous pancreatic enzyme supply on endogenous pancreatic enzyme excretion (2). This may be considered in the treatment of pancreatic retention pseudocysts caused by pancreatolithiasis.

*Author's contribution: De-Feng Li, Jun Yao and Zhen Shen contributed equally to this work.*

*Informed consent statement: Informed consent was obtained from the patient to publish these images.*

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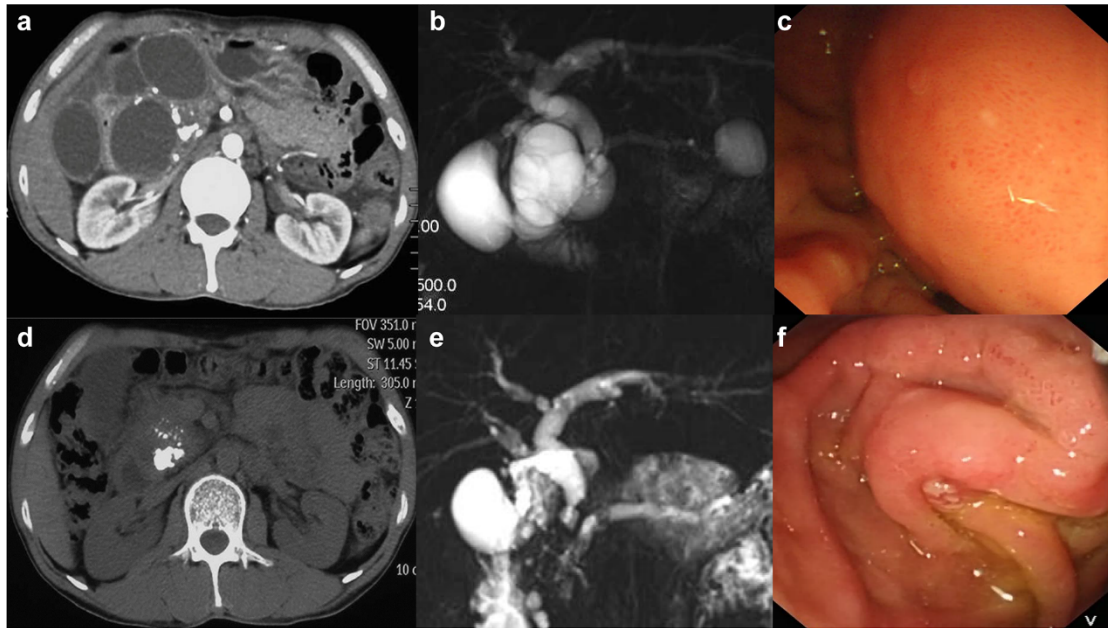


Fig. 1. A and B. Computed tomography (CT) and magnetic resonance cholangiopancreatography (MRCP) suggestive of chronic pancreatitis and pancreatolithiasis, with multiple large cystic lesions in the head and tail of pancreas. C. During ERCP, the major papilla was compressed by a large bulging mass. D and E. Six months later, CT and MRCP showed a spontaneous resolution of most of the pancreatic cysts after pancreatic enzyme replacement treatment. F. The major papilla was easily identified.