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DOI: 10.17235/reed.2023.10110/2023
Link: PubMed (Epub ahead of print)

Please cite this article as:

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The combination of EyeMax direct visualization system, EUS and ERCP for the precise treatment of intraductal papillary mucinous neoplasm

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Conflict of interest: the authors declare no conflict of interest.

Acknowledgements: the authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Keywords: Intraductal papillary mucinous neoplasm. EUS ERCP EyeMax Spyglass.

Dear Editor,

Intraductal papillary mucinous neoplasm (IPMN) accounts for 5.0%-7.5% of pancreatic tumors and 21%-33% of cystic tumors. They usually appear in people aged 60 to 70 years (1) and the main treatment is surgical excision. The surgical method is different according to the location of the lesion, so we try our best to achieve accurate treatment. Here, we describe an ultrasonography approach combined with ERCP and EyeMax three endoscopic systems, to achieve accurate treatment of IPMN, which is recommended to the majority of endoscopists.
Case report
A 74-year-old male patient was hospitalized with upper abdominal pain. CT and MRCP indicated dilatation of the main pancreatic duct and cystic lesions of the pancreatic tail; CA-19-9 was 67.9 IU/ml. The patient was diagnosed with pancreatic cystic disease and an IPMN was suspected. Endoscopic ultrasonography was first performed and found that the main pancreatic duct of the patient was dilated, with the widest point being 12.57 mm. The cystic lesion was in the tail of the pancreas, connected with the main pancreatic duct, and the maximum diameter of the cystic lesion was 48 mm. Thus, we further determined that the lesion was an IPMN of the pancreatic duct.

Secondly, ERCP can fully show the significant dilatation and a large number of irregular filling defects of the main pancreatic duct. However, we could not decide whether to perform distal pancreatectomy or total pancreatectomy. Thus, we applied the EyeMax, which showed a large amount of mucous material and a villus-like protrusion and a rich vascular network in the pancreatic duct. Finally, we determined that there were no lesions in the head and neck of the pancreas, which played a decisive role in our choice of radical surgery for the patient. Distal pancreatectomy was performed 2 days later.

Discussion
IPMN is a cystic disease of the pancreas that is difficult to diagnose and treat. We need to know its classification, lesion site, and treatment for individual differences (2,3). Spyglass is very valuable for the diagnosis of pancreatic cystic disease and biliary tract disease (4,5). EyeMax is a direct vision system similar to Spyglass, and the combination of EyeMax and EUS and ERCP can make a more accurate diagnosis and treatment of IPMN, which plays a very important role in the decision of radical surgery. It is hoped that more endoscopists will adopt this technique.

References


Fig. 1. A. CT showed full dilation of the pancreatic duct and cystic lesions at the tail of the pancreas. B. MR showed cystic lesions in the tail of the pancreas that appeared to connect with the pancreatic duct. C. EUS showed cystic echoless lesions in the tail.
of the pancreas, with internal prominences and connection with the main pancreatic duct. D. ERCP showed the significant dilatation and a large number of irregular filling defects of the main pancreatic duct. E. EyeMax showed a large number of villous eminences in the pancreatic duct an abundant basal dripping blood network. G. Biopsy forceps were used for villous histopathology.