

Endoscopic Ultrasonography in Chronic Pancreatitis

Echoendoscopy has been claimed to help in diagnosing chronic pancreatitis before the development of ductal lesions visible at endoscopic retrograde cholangiopancreatography (ERCP), as well as in delineating the complications of advanced chronic pancreatitis (1-4).

We report here on a patient with chronic pancreatitis in whom ERCP showed a complete blockage at the level of the body of the pancreas. Echoendoscopy showed a 7-mm impacted stone that was responsible for the obstruction, with upstream main pancreatic duct (MPD) dilatation (Figure 1). In the head of the pancreas, where the ducts were normal at ERCP, the parenchyma was heterogeneous and lobulated (Figure 2). The obstructive stone was treated by extracorporeal shock-wave lithotripsy (ESWL), followed by pancreatic sphincterotomy and stone fragments removal. Both plain films and echoendoscopy showed that the stone was pulverized after 750 shock waves at 19kV (Figure 3). The follow-up was unremarkable, with pain relief after MPD clearance, and the patient was discharged after seven days.

This observation illustrates the presence, in the same patient, of the so-called echoendoscopic "signs" of mild chronic pancreatitis (lobulation) and severe chronic pancreatitis (intraductal calcifications and MPD dilatation). Lobulated parenchyma on echoendoscopy was evidenced in an area in which the appearance of the MPD and secondary ducts was normal on pancreatography. This confirms that these echographic signs may be observed earlier than ductal abnormalities, and that echoendoscopy might suggest a diagnosis of chronic pancreatitis before ERCP. The histological findings corresponding to this peculiar appearance have not yet been established, due to the lack of resection specimens from the early stage of chronic pancreatitis. The appearance may be linked to parenchymal fibrosis, as suggested by several authors (2,3), but can be seen in older patients without the clinical findings associated with chronic pancreatitis. The specificity of these signs therefore remains to be confirmed in prospective studies.

The present case also illustrates the ability of echoendoscopy to analyze a blockage of the MPD observed at ERCP, visualizing the proximal duct, the hypoechoogenic aspect of the parenchyma around the impacted stone, and the change in its appearance after ESWL.



Figure 2: Head of the pancreas, showing the hyperechoic wall of the MPD (arrow) and the lobulated appearance of the parenchyma (endoscopic pancreatography was normal at this level).

L. Finet, J. Devière, M. Cremer

Department of Gastroenterology, Hôpital Erasme, Université Libre de Bruxelles, Brussels, Belgium

References

1. Amouyal G, Bellaïche G, Amouyal P et al.: Intérêt de l'échoendoscopie dans le diagnostic de pancréatite chronique alcoolique. résultats définitifs d'une étude prospective sur 52 patients. *Gastroenterol Clin Biol* 1993; 17 (2 bis): A84.
2. Lees WR: Endoscopic ultrasonography of chronic pancreatitis and pancreatic pseudocysts. *Scand J Gastroenterol* 1986; 21 (suppl 123): 123-129.
3. Nakashio K, Matsumoto J, Yoshikawa J et al.: Diagnosis of chronic pancreatitis by endoscopic ultrasonography. *Dig Endosc* 1991; 3: 279-285.
4. Zuccaro G, Sivak MV: Endoscopic ultrasonography in the diagnosis of chronic pancreatitis. *Endoscopy* 1992; 24 (suppl 1): 347-349.

Corresponding Author

J. Devière, M.D., Department of Gastroenterology
Hôpital Erasme, Université Libre de Bruxelles
Route de Lennik, 808, 1070 Brussels, Belgium

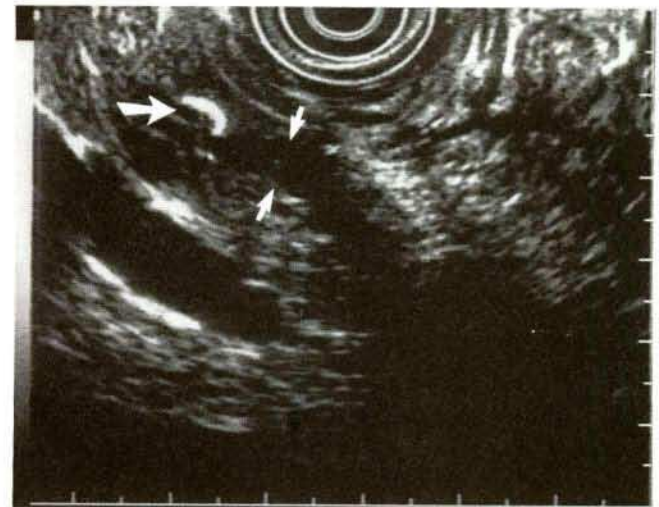


Figure 1: Obstructive stone (large arrow) and enlargement of the proximal MPD (small arrows).

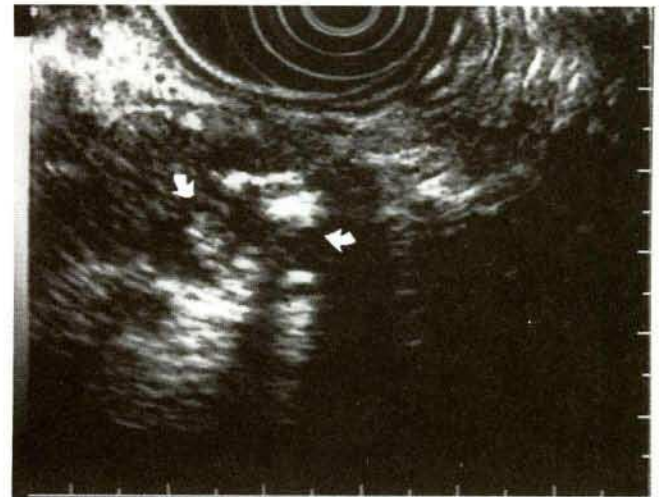


Figure 3: After ESWL, the stone has been reduced to multiple fragments (arrows), before endoscopic removal.