EDITORIAL

‘Doing the twist’:
Insight gained from spiral enteroscopy

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Innovation over the past decade has led to the development of novel techniques that enable deep enteroscopy, completion of previously failed colonoscopies and that permit access to the papilla in patients with surgically altered anatomy. Double-balloon enteroscopy (DBE) was first introduced in 2001 (1) followed by single-balloon enteroscopy (SBE) in 2006 (2). Both DBE and SBE are now widely available and practiced worldwide. The newest of these techniques is spiral enteroscopy (3), which uses an overtube with a raised spiral at the distal end to pleat the small intestine. The literature on spiral enteroscopy is developing, with early evidence suggesting that it offers diagnostic and therapeutic capabilities comparable with the balloon-assisted modalities while allowing enhanced scope control during withdrawal (4) and increased procedural speed (5).

Deep enteroscopy is a relatively invasive procedure and adverse events can occur. While all conventional complications of standard endoscopy are possible, considerable attention has been devoted to pancreatitis, which has been observed in 0.2% to 0.3% of DBE cases (6-8). In addition to clinical pancreatitis, asymptomatic hyperamylasemia is a well recognized and significantly more frequent phenomenon.Pancreatitis following SBE hadn’t been reported until recently (9) but hyperamylasemia has also been frequently observed (10). Several theories to explain the pancreatitis have been suggested including obstruction of the papilla following balloon inflation, irritation of the sphincter of Oddi, mechanical strain on the pancreas during repetitive push-pull movements of the overtube and vascular injury from compression of peripancreatic vessels. Of course, elevations in serum amylase levels are nonspecific and can be associated with surgically altered anatomy. Therefore, the origin of the elevations in amylase levels following spiral enteroscopy could not be determined.

Despite its limitations, the article by Teshima et al is an important contribution. Taken together with a large multicentre registry study reported in abstract form (12), in which no cases of pancreatitis were observed following 1750 spiral procedures, it certainly would appear that the risk of clinical pancreatitis following spiral enteroscopy is much lower than that observed following balloon enteroscopy. Furthermore, the frequent finding of hyperamylasemia in the absence of bona fide pancreatitis following spiral enteroscopy is noteworthy. The small bowel onto the overtube. These differences in technique and the apparent lower reported risk of pancreatitis during spiral enteroscopy may offer some insight into the mechanism of hyperamylasemia and the apparent lower reported risk of pancreatitis during spiral enteroscopy. It may be that elevations in amylase levels following spiral enteroscopy reflect either clinically insignificant pancreatic trauma from stretch or compression of peripancreatic vessels, or from ischemia or traumatic injury to the small bowel itself. In fact, it may also be that many of the cases of hyperamylasemia following balloon-assisted enteroscopy have nothing to do with the pancreas. Time will tell.

Spiral enteroscopy, along with DBE and SBE, represent landmark developments in endoscopy. These procedures certainly have drawbacks, including risks to patients; however, in those with appropriate indications, the procedure-related risks are typically outweighed by the many potential benefits. It is imperative that endoscopists discuss the possibility of pancreatitis following DBE and SBE – and possibly spiral enteroscopy – until additional data become available. However, while the frequent hyperamylasemia following these procedures is interesting, it is usually clinically insignificant and, thus, we do not measure it routinely in the absence of pain following the procedure.

DISCLOSURE: Paul A Akerman is a consultant for Olympus Corporation, USA.

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REFERENCES
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