Everybody on the Banding Bandwagon?

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Injection scierotherapy (1ST) has been the standard endoscopic treatment foresophageal varices for the past many years[1]. The technique uses a 21 or 23 gauge needle catheter to inject a scierosant substance into or around the varix to either produce thrombosis or a chemical inflammation to provoke mucosal and submucosal fibrosis, resulting in obliteration of the varix[2]. In 1989, Steigmann and colleagues reported endoscopic band ligation of esophageal varices (EVL) as an alternative, with the aim of introducing a technique atleast as effective as 1ST but associated with fewer complications[3]. This method of treatment involves the endoscopic placement of an elastic rubber band at the base of a vanx, which causes ischemic necrosis and sloughing off of the varix with eventual healing by fibrosis. Further modifications have simplified the technique so that the currently available multi-band ligators are much easier and quicker to use and do not require repeated insertions of the endoscopc thus obviating the need for overtubes[4]. Extensive work has been published on the comparative efficacy and safety of EVL and 1ST, providing data in favour of EVL, so that EVL seems set to become the standard endoscopic treatment for esophageal varices. Two articles in this issue of the journal report on the use of EVL in our own setting and compare it with 1ST, again with results in favour of EVL[5]. Is it theii time for everybody tojwnp on the banding bandwagon? The answer is most likely yes, but before that we need to examine sonic of the pros and cons of both techniques.

Although acute variceal bleeding is a dramatic presentation, it is important to recognise that most patients stop bleeding spontaneously, so that at the time of endoscopy it is uncommon to find actively spurting varices[6,7]. However, if left untreated, most varices will rebleed and therefore the reason for applying some form of therapy at the time of initial endoscopy is mostly to prevent rebleeding. Here EVL seems to have an edge over IST. A meta-analysis conducted by Laine and Cook[7], taking into account 7 trials with 547 patients randomised to either EVL or IST, showed that EVL reduced rebleeding rates with a common odds ratIo of0.52 (Cl, 0.37 to 0.74) between the various studies in favour of EVL. More recent studies corroborate the finding that EVL is more effective in reducing rebleeding from varices[8].

But what about the actively bleeding or spurting varix? The available literature in this regard is not clear, as most studies do not perform a sub-group analysis of such patients. The meta- analysis of Laine found similar rates of hcmostasis in actively bleeding patients undergoing EVL or 1ST (OR, 1.14, CI, 0.37 to 0.74) . Moreoverapplying EVL to an actively bleeding varix demands more expertise than IST applied by the free-hand tecimique: getting the bleeding point accurately into the band becomes difficult due to restricted vision caused by the hood of the banding equipment and the presence of blood. If the efficacy is the same, one can argue that 1ST may be the preferable and easier method to treat an actively spurting varix in many cases.

The next issue is that of variceal obliteration in order to prevent further bleeding episodes in the longer term, Both techniques achieve this objective in a similar proportion of patients i.e., between 27 and 90% of cases[10]. EVL is however superior to 1ST in that it achieves variceal obliteration in significantly lesser treatment sessions; a mean of 3.5-4 sessions vs >6 sessions required with IST[9]. As can be expected, either technique does not improve survival because the natural history of the underlying liverdisease is not altered.

Both EVL and 1ST can cause complications, including esophageal ulcers which may bleed, esophageal strictures or perforations, pulmonary infections or spontaneous bacterial peritonitis. Complications

peculiar to 1ST due to the introduction of sclerosant into the circulation include chemical mediastinitis or pneumonitis, renal impairement or embolic phenomenon[11]. As already alluded to. one of the original aims of Steigmann et al in introducing EVL was to reduce the procedure associated complications, and the available evidence suggests that EVL achieves this goal to an extent. In the studies covered by the meta-analysis of Laine, bleeding from treatment induced ulcers and esophageal strictures occured less often with EVL, although the difference was not statistically significant[12]. Lung infections and SBP were similarly less in patients who received EVL.

Finally, the question of cost needs to be addressed. 1ST, although requiring more treatment sessions, is less costly because the injection needle can be reused for the same patient many times and cheap sclerosants are available in the form of alcohol for instance. EVL may require less number of treatment sessions, but the banding equipment used is expensive and may be out of reach for many of our patients. Locally produced and modified kits, as used in one of the articles in this issue, could make EVL much more widely acceptable in our setting.

In summary, EVL is set to become the standard method of treating esophageal varices. However. itis unlikely that 1ST will become obsolete in the near future because it has the advantage of lower cost and may be preferable in dealing with the actively spurting varix. Gastroenierologists therefore need to keep their hand in for 1ST while learning EVL and in particular, 0.1. training programmes should continue to include proficiency in both techniques for their trainees. A cost effectiveness analysis in our patient population is also needed before EVL is adopted as the major endoscopic treatment modality for esophageal varices.

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