Endoscopic closure of an iatrogenic duodenal perforation: a novel technique using endoclips, endoloop, and fibrin glue

An 80-year-old woman with a flat duodenal tubulovillous adenoma presented for endoscopic mucosal resection (EMR). This lesion had received treatment with EMR and Nd:YAG laser in the past. The lesion was located in the proximal second portion of duodenum (D2), measured approximately 2 cm, and was half-circumferential from the 12-o’clock to the 6-o’clock position. The lesion was lifted with submucosal injection of methylene blue and saline. A multiband cap was used to place ligament bands around two areas for EMR. One area was targeted with a hexagonal snare, and after resection a 1-cm perforation became obvious at the lateral aspect of D2 (Fig. 1). Endoscopic clipping of the defect was attempted but, due to the large size of the defect and the wall being taut, the edges were not able to be approximated.

A “clutching rose stems” technique was used to close the defect (Fig. 2), as follows. A total of eight endoclips (Resolution clip; Boston Scientific, Natick, Massachusetts, USA) were placed circumferentially around the perimeter base of the clips. The snare was tightened, which successively around the perimeter base of the clips. The fibrin glue was essential in sealing the center hole after the endoclips and endoloop had brought the edges of the defect together. In the advent of newer resection techniques, further progress needs to be made in the area of endoscopic closure, such that perforations can easily be managed by the endoscopist.

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References
4 Lee TH, Bang BW, Jeong JJ et al. Primary endoscopic approximation suture under cap...

assisted endoscopy of an ERCP-induced duodenal perforation. World J Gastroenterol 2010; 16: 2305–2310


Bibliography
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