Use of anchor pronged clips to close complex polyp resection defects

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Closure of defects following complex polyp resection decreases risk of postprocedural bleeding.[1-7] The MANTIS clip (Boston Scientific, Marlborough, Mass, USA) is a variation of through-the-scope clips designed to help close larger resection defects (Fig. 1).[8] The clip uses anchor prongs to maintain a secure grasp on wound edges (Video 1, available online at www.videogie.org). In the clip drag technique, the anchor pronged clip is opened and closed (but not deployed) on the normal edge of the defect. The clip is then gently brought to the other edge of the defect, at which point the clip is opened, closed on the other edge, and then deployed. Alternatively, in the open clip technique, the opened clip is used to anchor the tissue on one edge of the wound. The scope is maneuvered with the open clip dragging the edge of the wound and closing the clip over an opposing edge of the wound. This technique may be particularly suitable when closing a wound in a distal to proximal fashion to avoid excessive narrowing of the lumen that could result if a lateral-to-lateral edge closure approach was used.

A 46-year-old man was referred for treatment of a 32-mm Paris IIa+Is rectosigmoid junction polyp (Fig. 2). The lesion was resected by endoscopic submucosal dissection. The resection site was effectively closed with 4 anchor pronged clips and 2 standard clips. Closure of the resection site required 12 minutes.

In a second case, the open clip technique was used to close a 2.5-cm endoscopic submucosal dissection defect in the distal rectum near the dentate line. The open clip was first anchored in the normal mucosa on the distal side of the resection. The colonoscope was then advanced forward with the clip still open, pulling the distal end of the wound toward the proximal end until the normal mucosa on the proximal end of the wound could be captured when the clip was closed.

In a third closure case, the precise rotation capability of the device is demonstrated. The clip can be rotated into an optimal position either by the assistant or directly by the endoscopist by grasping the shaft of the catheter where it enters the accessory port. Once the tissue is grasped, if the endoscopist is still not satisfied with the position, the tissue can easily be released without causing significant trauma, and a more optimal site can be chosen instead.

DISCUSSION

We find anchor pronged clips to be easy to use in the closure of complex polyp resection defects. Anchor pronged clips overcome challenges faced by standard clips, including slipping off the edges of the mucosa when attempting to close larger defects and the lack of a robust closure. In this case, the anchor pronged clips can easily bring opposing edges of the defect together. This video demonstrates several cases of efficient and reliable closure of 2- to 5-cm wounds.

Several features make the anchor pronged clips particularly appealing to endoscopists. The simple operation, precise rotation capability, and ability to release grasped tissue and reposition if necessary before application make the device very user friendly and obviate the need for a long learning curve. The device can be used in the upper or lower GI tract, with an upper endoscope or a colonoscope. It can be used in tortuous anatomy and with a retroflexed scope. It can also be used with or without a cap on the end of the scope. The cost of the anchor pronged clip is higher than standard clips, but it may be significantly lower than suturing devices if the procedure can be completed with only 1 to 2 anchor pronged clips in combination with standard clips.

DISCLOSURE

Dr Wei is a consultant for Neptune Medical and AgilTx. Dr Friedland is a consultant for Capsovision and Intuitive Surgical.

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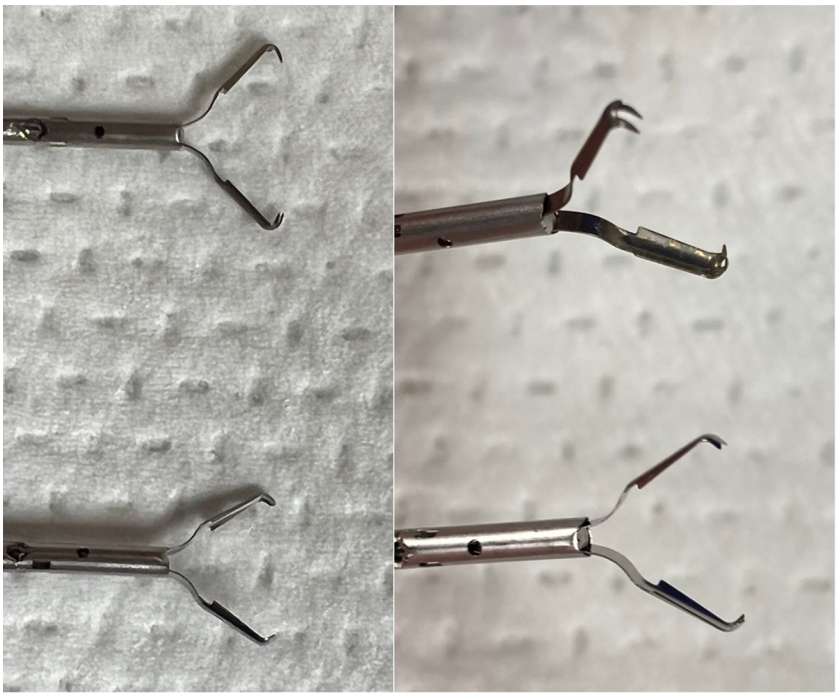

Figure 1. Anchor pronged clip (*top*) and standard clip (*bottom*).

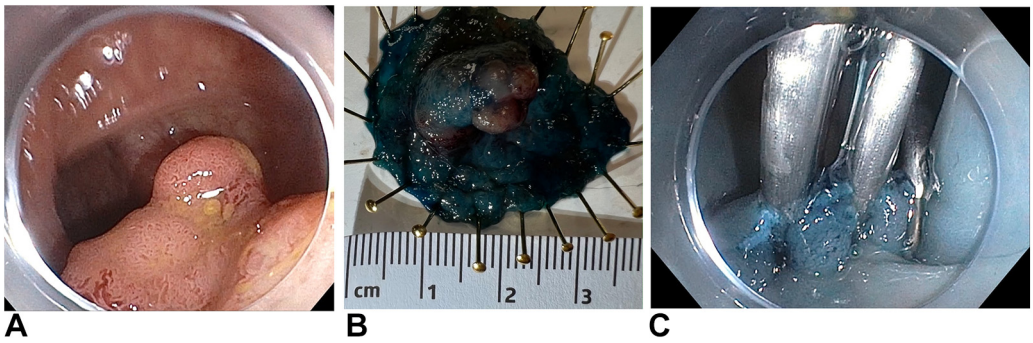

Figure 2. A 32-mm rectosigmoid polyp before removal/pinning (**A**), after removal/pinning (**B**), and after closure of the resection defect with a combination of anchor pronged clips and standard through-the-scope clips (**C**).

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