



# Use of a novel dual-action traction device to facilitate endoscopic submucosal dissection

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## INTRODUCTION

Traction-assisted endoscopic submucosal dissection (ESD) facilitates visualization of the submucosal layer, enabling a clear dissection plane during ESD.<sup>1</sup> Many currently available traction methods can be cumbersome to implement and require assembly and/or scope exchange.<sup>2</sup> Recently, a novel Dual Action Tissue (DAT) clip (Micro-Tech Endoscopy USA Inc, Ann Arbor, Mich, USA) was developed to facilitate closure of large GI defects.<sup>3</sup> The DAT clip is a through-the-scope clip with 3 arms: a fixed center post to serve as an anchor point and 2 color-coded clip arms that operate independent of one another (Fig. 1). Conceptually, the dual independent arm action of the DAT clip could facilitate tissue traction during ESD, by using 1 clip arm to grab the mucosal flap while the other clip arm is clamped onto the opposite mucosal wall. In this video, we demonstrate 3 cases in which the DAT clip was used to simplify tissue traction during ESD (Video 1, available online at [www.videogie.org](http://www.videogie.org)).

## PROCEDURE

Patient 1 was referred for ESD of a 3.5-mm gastric adenoma along the posterior wall of the antrum. After completion of a full circumferential incision, it was decided that tissue tension would be required to efficiently continue ESD. Thus, 1 arm of the DAT clip was first used to grab the proximal mucosal flap. Then, without letting go, the other arm was able to direct tissue tension to the opposite stomach wall, clamp onto the mucosa, and finally deploy.

*Abbreviations: DAT, Dual Action Tissue; ESD, endoscopic submucosal dissection.*

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After deployment, constant tissue tension was generated, and the submucosal dissection plane was clearly visible (Fig. 2). Submucosal dissection was then easily completed without any muscularis propria defects, 9 minutes after clip deployment with a total procedure time of 36 minutes. Final pathology revealed pyloric gland adenoma with margins negative for dysplasia or adenoma.

Patient 2 was referred for ESD of a laterally spreading granular tumor at the hepatic flexure. First, a circumferential mucosal incision of the lesion was performed. Then, submucosal dissection was performed using cap-assisted tissue traction in standard fashion. Once 50% of the lesion was dissected via ESD, the DAT clip was used to grasp the center of the incised mucosal flap with tension directed to the opposite proximal colon wall. After deployment, constant tension applied by the DAT clip allowed distinction between the submucosal and muscle layers, thereby facilitating complete dissection of a very large colon polyp within 84 minutes. Final pathology revealed tubulovillous adenoma with high-grade dysplasia and margins free of tumor.

## RESULTS

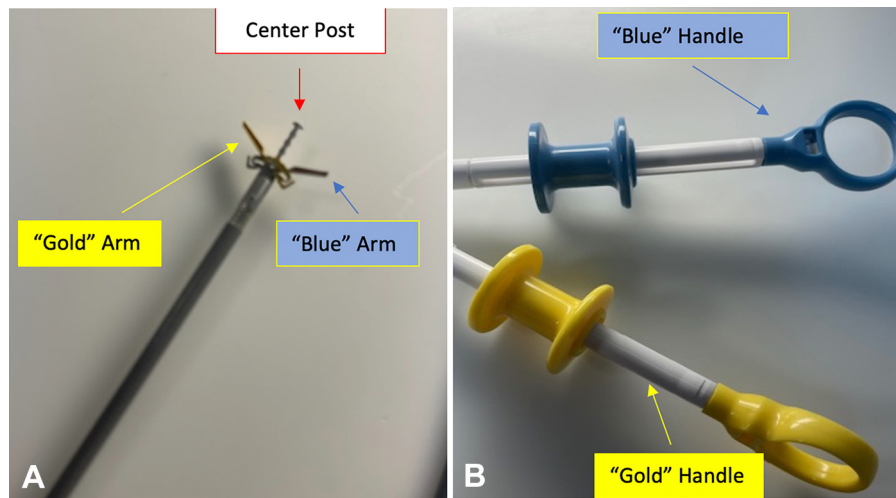
There were no postprocedural adverse events, with all 3 histological specimens demonstrating R0 resection.

## CONCLUSION

The DAT clip is a novel through-the-scope clip designed for tissue approximation of large defects. In this video, we demonstrate how the dual independent arm action of the DAT clip facilitates real-time adjustment and effective traction during ESD. Its use may be limited in difficult locations and caution must be taken to ensure tissue injury does not occur upon removal. Additional larger studies on cost, safety, and efficacy are needed to corroborate these initial findings.

## DISCLOSURE

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**Figure 1.** **A**, The Dual Action Tissue clip has a center post in addition to 2 color-coded clip arms that can open and close independently of one another. **B**, Opening and closing of each arm is controlled by 2 color-coded handles, allowing easy distinction during operation.



**Figure 2.** The dual-action independent arms of the Dual Action Tissue (DAT) clip facilitate tissue manipulation and traction by **(A)** clamping of 1 arm to the mucosal flap followed by **(B)** clamping of the other clip arm to the opposite wall. **C**, Deployment of the DAT clip provides constant tension facilitating clear visualization of the dissection plane.

*Lumendi, Olympus, ConMed, Boston Scientific Corp, Abbvie, Apollo Endosurgery, and Creo Medical. Dr Keibanian is a consultant for Lumendi. Dr Hasan is a consultant for Olympus and Boston Scientific Corp. Dr Yang is a consultant for Olympus, Fujifilm, Medtronic, Apollo Endosurgery, and Microtech.*

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