Endoclip-assisted giant colon lipoma resection

Shou-jiang Tang, MD, Yehia M. Naga, MD

Not infrequently, endoscopists encounter colon lipomas during colonoscopy. These lipomas are usually small (<2 cm) and appear as yellowish, soft, submucosal nodules.[1] Colon lipomas are 90% submucosal only, and in up to 10% of cases, muscularis propria or subserosal layers are involved.[1] As lipomas grow in size, with intestinal peristalsis, they can become pedunculated or form a pedicle or stalk. The vast majority of lipomas are an incidental finding, and they do not cause any symptoms. Endoscopic removal is not indicated or necessary. Medium-to-large (2-4 cm) colon lipomas can potentially cause obstructive symptoms such as pain, bloating, constipation, postobstructive diarrhea, intussusception, or

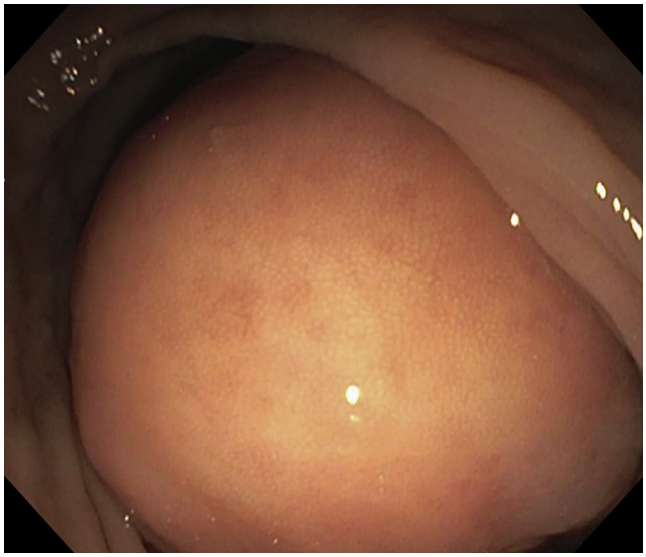

Figure 1. Endoscopic image of the 7-cm × 6-cm lipoma causing near total obstruction.

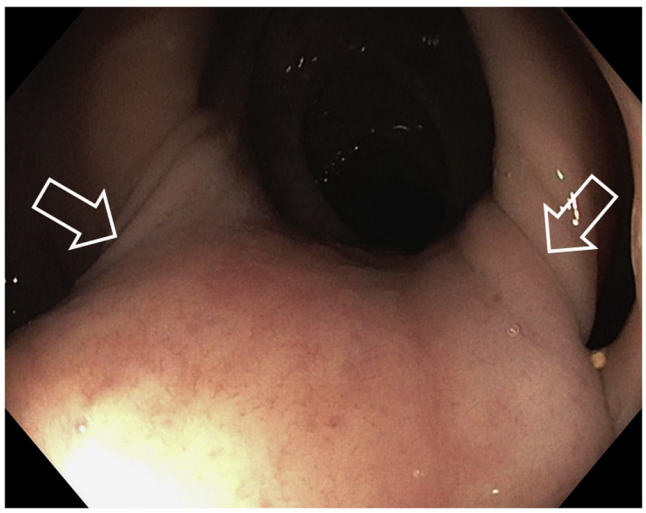

Figure 2. Endoscopic image of the thick lipoma stalk (*arrows*).

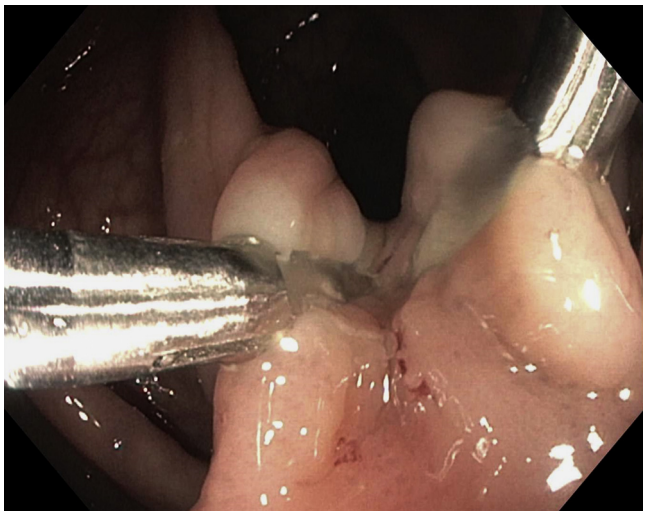

Figure 3. Two endoclips are placed to partially ligate the stalk before needle-knife dissection.

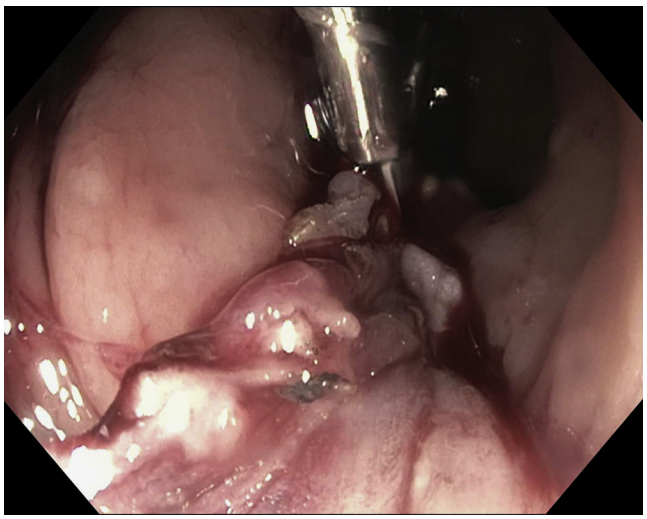

Figure 4. Sequential clipping and dissection of the stalk.

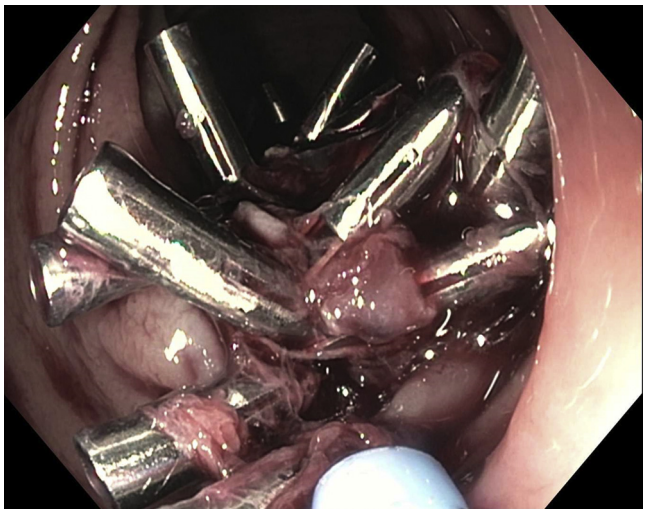

Figure 5. Endoclips placed on the resection base of the lipoma.

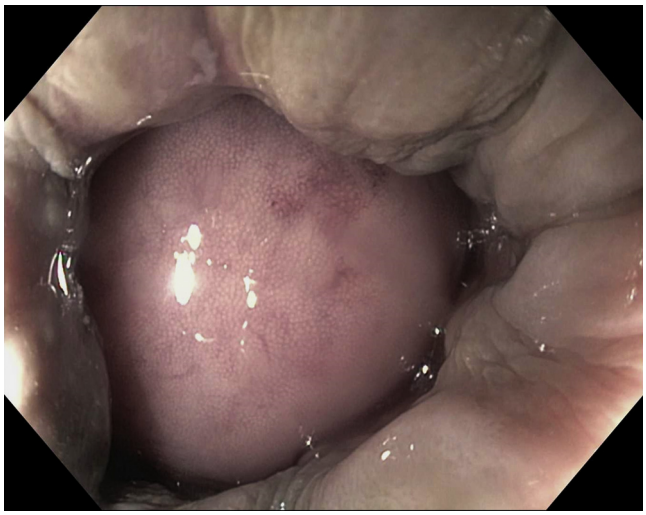

Figure 6. The resected lipoma obstructing the anal canal.

bleeding.[1] According to a recent review, giant lipomas (>4 cm) are usually symptomatic.[1] For symptomatic lipomas, endoscopic or surgical resection is needed.[2-9] For large and giant pedunculated lipomas, the normal muscular propria layer of the colon surrounding the pedicle can be evaginated into the stalk, forming a pseudopedicle.[3,4] Endoscopic resection of these large and giant lipomas carries a perforation risk as high as 8%.[1,4] We report a case of symptomatic giant sigmoid colon lipoma (7-cm × 6-cm) that was successfully removed with endoclip-assisted dissection.

A 62-year-old healthy woman experienced progressive lower abdominal cramps, constipation, and fecal urgency. A colonoscopy conducted elsewhere revealed a large colon submucosal mass in the distal sigmoid colon. She was referred to us for EUS and potential endoscopic resection.

Figure 7. Resected lipoma: 7.1 cm × 5.6 cm × 4.2 cm on ex vivo evaluation.

On EUS with use of a linear probe, a >6 cm well-defined, submucosal, soft mass was seen, and it caused nearly total luminal obstruction (Fig. 1). The echo textures were homogenous and hyperechoic, typical of a lipoma.

The patient consented to endoscopic removal before the procedure. A double-channel therapeutic gastroscope (GIF-2TH180, Olympus, Tokyo, Japan) was used for resection. Considering the size of the lipoma, the thick stalk (Fig. 2), and the possibility of a pseudopedicle in the stalk, we decided to proceed with endoclip-assisted, stepwise, pedicle dissection to remove the lipoma. The traditional "loop then snare resection" approach was not considered because of the giant size of the lipoma.

We chose clips with a 16-mm opening arm span (Instinct clips; Cook Medical, Winston-Salem, NC, USA) for maximal stalk ligation (Fig. 3). We used an endoscopic needle-knife (Huibregtse needle-knife, HPC-2; Cook Medical), and the stalk distal to the placed endoclips was partially dissected (Fig. 4). With endoscopic needle injection of diluted epinephrine (1:10,000) proximal to the placed endoclips and additional sequential clip placement, the stalk was completely dissected. A total of 4 endoclips were placed at the resection base to close the base and to stop some mild oozing at the base (Fig. 5). In addition, argon plasma coagulation (ERBE USA, Marietta, Ga, USA) was applied at the base at certain spots suspected of mild oozing.

The freed lipoma descended to the anal outlet (Fig. 6) and spontaneously expulsed externally with the passing of gas (Fig. 7). On ex vivo evaluation, the lipoma measured 7.1 cm × 5.6 cm × 4.2 cm. The patient was discharged home after the procedure. She did not report bleeding, fever, or pain during the follow-up period except for mild left-lower quadrant discomfort that lasted about 10 hours. All of her obstructive GI symptoms resolved the day after endoscopic resection.

We propose that endoclip-assisted, stepwise stalk dissection is a viable and safe option in patients with symptomatic medium-to-large (2-4 cm) and giant (>4 cm) colon lipomas. Endoclip ligation aims to prevent intraoperative and postprocedural bleeding and minimizes the risk of perforation due to dissection, especially with the possibility of underlying pseudopedicle. We used an endoscopic needle-knife for dissection because we did not have endoscopic submucosal dissection (ESD) devices readily available. It is probably easier to use an ESD device for dissection, such as a hook knife or an insulated tip knife (Video 1, available online at www.VideoGIE.org).

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

REFERENCES

1. Crocetti D, Sapienza P, Sterpetti AV, et al. Surgery for symptomatic colon lipoma: a systematic review of the literature. Anticancer Res 2014;34:6271-6.
2. Peters MB Jr, Obermeyer RJ, Ojeda HF, et al. Laparoscopic management of colonic lipomas: a case report and review of the literature. JSLS 2005;9:342-4.
3. Khawaja FI. Pedunculated lipoma of the colon: risks of endoscopic removal. South Med J 1987;80:1176-9.
4. Pfeil SA, Weaver MG, Abdul-Karim FW, et al. Colonic lipomas: outcome of endoscopic removal. Gastrointest Endosc 1990;36:435-8.
5. Kim CY, Bandres D, Tio TL, et al. Endoscopic removal of large colonic lipomas. Gastrointest Endosc 2002;55:929-31.
6. Raju GS, Gomez G. Endoloop ligation of a large colonic lipoma: a novel technique. Gastrointest Endosc 2005;62:988-90.
7. Ivekovic H, Rustemovic N, Brkic T, et al. Endoscopic ligation ("loop-and-let-go") is effective treatment for large colonic lipomas: a prospective validation study. BMC Gastroenterol 2014;14:122.
8. Sugimoto K, Sato K, Maekawa H, et al. Unroofing technique for endoscopic resection of a large colonic lipoma. Case Rep Gastroenterol 2012;6:557-62.
9. Lee KJ, Kim GH, Park DY, et al. Endoscopic resection of gastrointestinal lipomas: a single-center experience. Surg Endosc 2014;28:185-92.

Division of Digestive Diseases, Department of Medicine, University of Mississippi Medical Center, Jackson, Mississippi, USA.

https://doi.org/10.1016/j.vgie.2018.12.012