

Wire-traction device–assisted papillectomy of retracted papilla

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Ampullary adenomas are precancerous lesions arising at duodenal papilla. They could be sporadic or associated with familial adenomatous polyposis. Endoscopic papillectomy has become the primary therapeutic modality for the management of the majority of ampullary adenomas, with surgery reserved for complicated adenomas or for confirmed or suspected adenocarcinomas.^{1,2} However, in certain instances like fibrosed or retracted papilla, regrowth at prior resection site or overhanging duodenal folds could pose a significant challenge for successful papillectomy. We herein present a case of ampullary adenoma with low-grade dysplasia involving a flat and retracted papilla with an overhanging fold leading to failed resection attempts despite using multiple tools and lifting. We then used a wire-traction device with clips to lift the folds and expose the adenoma for successful en bloc snare resection of the ampullary adenoma.³

A 45-year-old woman with history of fatty liver disease, diabetes mellitus type 2, and obesity was seen in our clinic for recurrent pancreatitis. About a year ago before her presentation, she was found to have a 1.5-cm sessile ampullary polyp without any extension into the common bile duct. Biopsies confirmed tubular adenoma, and she underwent EMR, which was complicated by GI bleeding and acute pancreatitis. The procedural report from the other institution was unavailable, and thus it was not clear whether a pancreatic stent was placed after the previous papillectomy. After that procedure, the patient had multiple episodes of pancreatitis for which she was referred to our institution.

MRCP confirmed a short stricture in the genu region of pancreatic duct. She underwent an ERCP for the treatment of pancreatic duct stricture. During examination, a regrowth of ampullary polyp was found, and biopsies confirmed ampullary adenoma with low-grade dysplasia. Endoscopic papillectomy was attempted but was unsuccessful because of the flat, retracted nature of papilla and location of the



Figure 1. Ampullary adenoma with flat and retracted papilla with overhanging duodenal folds.



Figure 2. Improved exposure of ampullary adenoma after placement of wire-traction device.

adenoma under duodenal folds despite using multiple tools like use of hemostatic clips to secure the overhanging folds and a submucosal injection to facilitate adequate prominence of the ampulla for snare resection.

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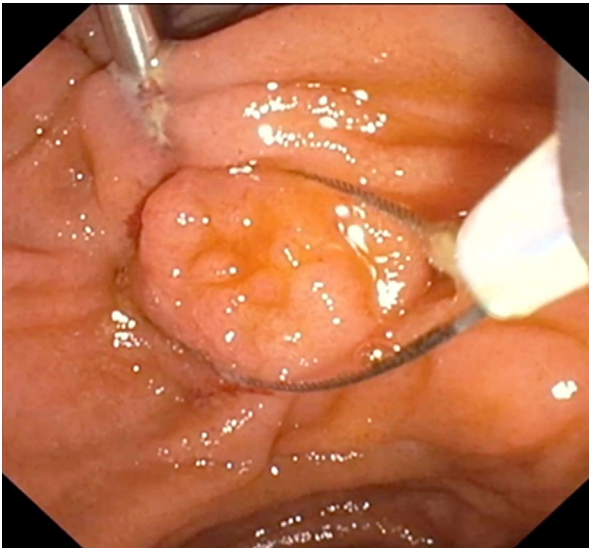


Figure 3. Successful snare placement after improved exposure of ampullary adenoma with wire-traction device.

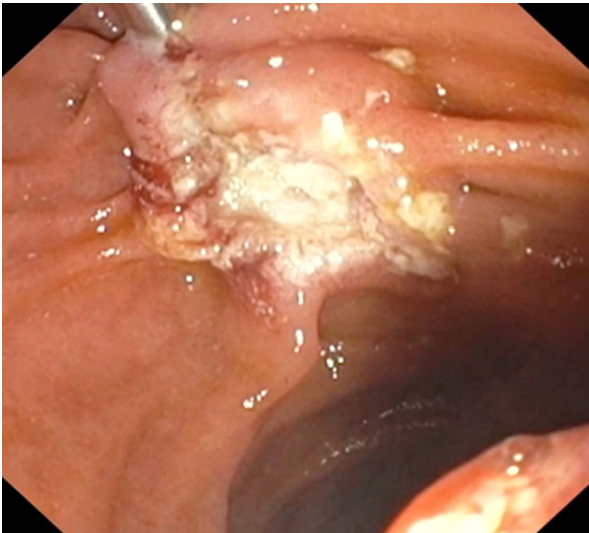


Figure 4. Wire-traction device–assisted en bloc resection of retracted papilla with adenoma.

A wire-traction device with clips (ProdiGI Wire; Medtronic, Dublin, Ireland) was then used to lift the duodenal folds and expose the ampullary adenoma for snare papillectomy (Figs. 1-3). First, the primary clip and traction wire were inserted through the working channel of the ERCP scope, and a clip was deployed above the ampulla, grasping the overhanging folds with enough space left for snare resection. Then, using a forward-viewing endoscope, a second clip was used to grab the wire-traction device, which was pulled into the duodenal bulb and deployed in a manner to provide constant tension. This

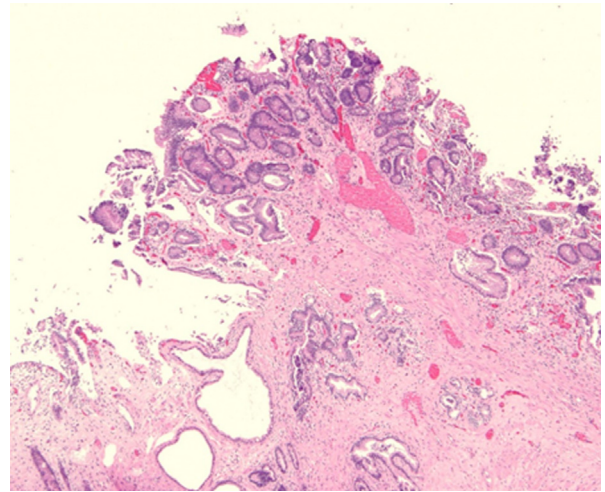


Figure 5. Tubular adenoma with low-grade dysplasia (H&E, orig. mag. $\times 4$). (Image courtesy Dr Ilyssa O. Gordon.)



Figure 6. Ampulla at follow-up endoscopy after removal of stents.

led to lifting of the folds above the ampulla and provided excellent exposure and protrusion of the ampulla adenoma complex for resection. Then, using a snare, the major papilla with the polyp was grasped and resected en bloc using electrocautery, and the polyp was retrieved with grasping forceps (Fig. 4). Afterwards, underwire-guided pancreatic and biliary stents were successfully placed. The wire-traction device was then removed atraumatically by gentle rotatory traction using grasping forceps (Video 1, available online at www.videogie.org). The patient was discharged home without any postprocedure adverse events,

and pathology confirmed complete removal of adenoma with negative margins (Fig. 5). There was no residual polyp at the ampulla at the patient's follow-up endoscopy (Fig. 6).

We herein report a case of ampullary adenoma regrowth at the site of prior resection. Repeat endoscopic resection was challenging because of the flat and retracted nature of papilla, scarring from prior resection, and overhanging duodenal folds. Our case showcases the use of a wire-traction device for successful papillectomy of a retracted papilla by lifting the overhanging folds and providing constant traction with excellent exposure for snare resection. Originally devised for endoscopic submucosal dissection, the wire-traction device is a simple tool that is user friendly with easy maneuverability and does not add further complexity to the procedure.³ Further work is needed to assess if traction devices like wire-traction could be used for successful papillectomy or in cases with difficult cannulation secondary to retracted papilla, overhanging folds, or intradiverticular location of the papilla.

DISCLOSURE

Dr Bhatt and Cleveland Clinic receive royalties from Medtronic for the ProdiGI traction wire, which is presented in this video. Dr Bhatt is also a consultant for Medtronic, Lumendi, Boston Scientific, and Steris. All other authors disclosed no financial relationships.

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