



Is It Possible to Treat a Giant Nonpedunculated Colorectal Polyp by Handmade Colonoscopic Band Ligator?

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Abstract

Endoscopic band ligation (EBL) is effective for treatment of both variceal and non-variceal upper-gastrointestinal hemorrhage. Ibanez-Sanz, *et al.* report that EBL without resection is an easy and safe in small superficial upper gastrointestinal lesions. There have been only case reports on the use of EBL in the colon polyps. In this case, we present our experience with the colonoscopic band ligator (CBL) approach for the treatment of a large nonpedunculated colorectal polyp. A 42-year-old woman came to our hospital with constipation. Colonoscopy revealed 35-mm nonpedunculated colorectal polyp in the splenic flexure. Histopathological evaluation revealed tubulovillous adenomatous polyp with focal high grade dysplasia. We previously produced our own CBL using some silicon and plastic materials. Due to absence of alternative treatment options at that time we decided to use CBL for treatment. The procedure was quite successful. 90% of the polyp was successfully ligated in a single session. The procedure was repeated to residual lesion after 15 days. Repeat colonoscopy 30 days later showed that the polyp was completely lost, the superficial scar area in the base of ligation. Histopathological evaluation revealed reactive changes and superficial inflammation. Dysplastic finding was not observed. In the light of our experience, treatment with CBL is promising in terms of applicability and development.

Keywords: Colorectal Polyp; Endoscopic Band Ligation; Colonoscopic Band Ligator

Abbreviations

EBL: Endoscopic Band Ligation; CBL: Colonoscopic Band Ligator; EMR: Endoscopic Mucosal Resection; UGI: Upper Gastrointestinal; LNCP: Nonpedunculated Colorectal Polyp; ESD: Endoscopic Submucosal Dissection.

Introduction

Increasing numbers of early stage colorectal cancers and precancerous adenomatous lesions, polypoidal type lesions, and flat and depressed type lesions can be visualised and treated endoscopically. Endoscopic polypectomy is becoming increasingly safe and ambitious, although this treatment comes with a price tag: complications secondary to polypectomy. These complications are more frequent in sessile polyps, and in those over 2 cm in size. They can generally be grouped into two types: hemorrhages and perforation [1]. Endoscopic mucosal resection (EMR) is a major

therapeutic advance in the treatment of sessile and flat colorectal polyps [2]. Endoscopic band ligation (EBL) is effective for treatment of both variceal and non-variceal upper-gastrointestinal hemorrhage. Ibanez-Sanz, *et al.* report that EBL without resection is an easy and safe technique that should be considered in patients with multiple morbidities and small superficial upper gastrointestinal (UGI) lesions [3]. There have been only case reports on the use of EBL in the colon polyps [4]. We previously produced our own "handmade" colonoscopic band ligator (CBL) using some silicon and plastic materials used in the automotive industry. CBL had a larger (front-diameter 16mm) and conical cap than the standard endoscopic band ligators (figure 1a). And we used the CBL in cases with hemorrhoid, bleeding rectal ulcer, pedunculated polyp, and we had effective results before.

In this article, we present our experience with the CBL approach for the treatment of a large nonpedunculated colorectal polyp.

A 42-year-old woman, came to our hospital with constipation. She had a history of colorectal carcinoma in her family. Colonoscopy was performed. 35-mm nonpedunculated colorectal polyp (LNPCP) was seen in the splenic flexure at 120 cm to the anal verge (figure 1b). Histopathological evaluation revealed tubulovillous adenomatous polyp with focal high grade dysplasia. Due to the technical inadequacies, absence of alternative treatment options at that time and patient's request (the patient refused to be referred to another center), we decided to use CBL for treatment.

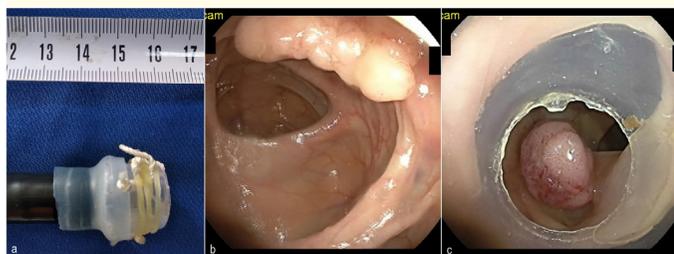


Figure 1: a. Handmade colonoscopic band ligator attached to the colonoscope; b. Endoscopic appearance of a large nonpedunculated colorectal polyp; c. Endoscopic appearance of ligated polyp after first procedure applied with colonoscopic band ligator.

The procedure was quite successful. Using a colonoscope with a CBL attached to the tip, we positioned the polyp in the center of the cap. The polyp was then suctioned and into the cap of the CBL, and bands were released. 90% of the polyp was successfully ligated in a single session (figure 1c). Endoscopic evaluation 15 days later showed that the residual 7-mm polypoid lesion and superficial ulcer (figure 2a). Biopsies were taken at the edge of the ulcer. CBL procedure was repeated to residual lesion (figure 2b). Repeat colonoscopy 30 days later showed that the polyp was completely lost, the superficial scar area in the base of ligation (figure 2c). Re-biopsies were taken at the edge of the scar area. Histopathological evaluation revealed reactive changes and superficial inflammation (both 15th and 30th days). Dysplastic finding was not observed.

Discussion

According to our literature screening, this kind of technique has not been reported. The general conclusion is that the band ligator devices in the small intestine and the right colon are not safe and is probably safe in the thick left colon [5]. The advantages of the use of CBL are as follows: 1, It is an easy-to-implement technique; 2, It provides treatment for every colonic area that the colonoscope can reach; 3, It has a low risk of bleeding and perforation; 4, It is quite cost-effective treatment option. The disadvantages of treatment with CBL in such cases are as follows: 1, The histology of a

tumor can't be evaluated accurately because the tumor falls off spontaneously after band ligation; 2, The recurrence risk of lesions of treatment with this technique is uncertain; 3, "En bloc" resection is recommended in this case because it provides more accurate histological assessment and reduces the risk of recurrence [6].



Figure 2: a. Endoscopic evaluation 15 days later showed that the residual 7-mm polypoid lesion and superficial ulcer; b. Endoscopic appearance of ligated residual polyp after second procedure applied with colonoscopic band ligator; c. Repeat colonoscopy 30 days later showed that the polyp was completely lost, the superficial scar area in the base of polypectomy.

ESD for large (>2cm) LNPCPs is effective and safe, with rarely recurrence. The guidelines show this kind of tumor should be treated with piecemeal EMR, EMR, or endoscopic submucosal dissection (ESD) regularly [2,6]. The treatment with CBL in such cases may be an assistant procedure to ESD or EMR. This method may be helpful for the prevention of complications such as bleeding and perforation, especially in patients using anticoagulants. Ibanez-Sanz, et al. report that management of early small lesions in UGI with EBL without use of electrocautery appears to be a safe, effective, simple and widely available technique in patients who are not good candidates for surgery [3]. We agree with Ibanez Sanz's report. In addition, we think that EBL (or CBL) treatment without dissection may be safe technique in the left colon. The treatment with CBL may be used as an alternative for the treatment of LNPCPs in selected cases, if EMR or ESD are not possible.

Handmade colonoscopic band ligator treatment for a giant non pedunculated colorectal polyp

Firstly we gave 20cc saline to the polyp base.

Treatment with colonoscopic band ligator.

15 days after the procedure.

Second treatment with colonoscopic band ligator to residual polyp. 30 days after the first procedure (15 days after the second one).

Thank you for your patience.

Conclusion

In the light of our experience, treatment with CBL is promising in terms of applicability and development.

Acknowledgment

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Video: Handmade colonoscopic band legator treatment for a giant nonpedunculated colorectal polyp: Using a colonoscope with a colonoscopic band ligator (CBL) attached to the tip, we positioned the the polyp in the center of the cap. The polyp was then suctioned and into the cap of the CBL, and bands were released.

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