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**Prevention of late complications of endoscopic resection of colorectal lesions with a coverage agent: Current status of gastrointestinal endoscopy**

Miao YD *et al*. Late complications colorectal lesions resection prevention

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**Abstract**

Endoscopic ectomy of large nonpedunculated colorectal lesions (≥ 20 mm) might cause significant adverse incidents, such as delayed perforation and delayed bleeding, despite the closure of mucosal lesions with clips. The conventional utilization of prophylactic clipping has not decreased the risk of postprocedural delayed adverse events, and additional outcomes and cost-effectiveness research is needed for patients with proximal lesions ≥ 20 mm, in whom prophylactic clipping might be useful. Coverage of the wound after endoscopic excision offers shield protection against delayed concomitant diseases.

**Key Words:** Endoscopic resection; Non-pedunculated colorectal lesions; Complication; Delayed bleeding; Delayed perforation; Coverage agents

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**Core Tip:** The conventional application of prophylactic clipping has not diminished overall risk of postprocedural delayed adverse events, and additional efficacy and cost-effectiveness studies are needed in patients with large (20 mm) non-pedunculated colorectal lesions, in whom prophylactic clipping may be useful. The preventive process significantly decreases the risk of delayed adverse events (delayed bleeding and delayed perforation) by more than 80%.

**TO THE EDITOR**

We read the paper by Lorenzo-Zúñiga *et al*[1] with great interest. The authors reviewed the currently available literature on preventing delayed perforation (DP) and delayed bleeding (DB) with overlays after endoscopic mucosal excision or endoscopic submucosal resection.

This systematic collection and review of the present literature on prevention of DP and DB with coverage bandages after endoscopic submucosal dissection or endoscopic mucosal resection (EMR) of large nonpedunculated colorectal lesions (LNPCLs) indicated several interesting outcomes; however, there are some deficiencies. First, the database for literature selection should not be limited to PubMed. Other common medical databases should also be selected, such as Medline, Ovid, Embase, and Web of Science. The data obtained in this way will be more comprehensive, and the results will be more meaningful.

The European Society of Gastrointestinal Endoscopy (ESGE) recommends hot snare polypectomy for pedunculated polyps. To stem bleeding from pedunculated colorectal polyps with stalk diameters ≥ 10 mm or heads ≥ 20 mm, the ESGE recommends pretreatment of the stalk with injectable diluted epinephrine and/or mechanical hemostasis (moderate quality evidence, highly recommended)[2].

We agree with Lorenzo-Zúñiga *et al*[1], who reported that the conventional utilization of prophylactic clipping has not diminished the overall risk of postprocedural bleeding, and focus on the economic efficiency ratio is needed. A cohort study of 8366 colonoscopies involving polypectomy conducted by Forbes et al[3] yielded 95 delayed postpolypectomy bleeding (DPPB) incidents. Preventive clipping was not related to reduced DPPB (adjusted odds ratio 1.27; 0.83-1.96). Other efficacy and cost-effectiveness studies are needed for patients with proximal lesions ≥ 20 mm, in whom prophylactic clipping might be useful. Another multicenter cohort study was conducted on patients with nontruncated lesions ≥ 20 mm resected by EMR and found that DB occurred in 45 of 1034 EMRs (4.5%)[4]. Tsutsumi *et al*[5] performed a systematic review and meta-analysis to identify whether endoscopic prophylaxis procedures reduced delayed adverse events. They found that the preventive process significantly decreased the risk of delayed adverse events (DB and DP) by more than 80%. We drew a schematic diagram to give an overview of this paper. Endoscopic removal of LNPCLs might lead to significant adverse events, such as DP and DB, despite the closure of mucosal lesions with clips (Figure 1A). Coverage of the defects after endoscopic excision supplies shielding protection to prevent delayed complications (Figure 1B). The above results confirm that the work done by Lorenzo-Zúñiga *et al*[1] is worthy of recognition and that our findings can serve as a complement to their research. In the future, we should re-evaluate the efficacy of prophylactic clipping of LNPCLs and further explore the role of coverage agents in preventing delayed adverse events.

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**Footnotes**

**Conflict-of-interest statement:** No conflict of interest associated with any of the senior authors or other coauthors contributed their efforts in this manuscript.

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**Figure Legends**



**Figure 1 Flow chart of the research design and analysis.** This figure was created with BioRender.com. A: Endoscopic excision of large nonpedunculated colorectal lesions might lead to significant adverse complications, such as delayed bleeding (DB) and delayed perforation (DP); B: Coverage of the wound after endoscopic excision supplies shield protection to reduce or prevent delayed complications, such as DB and DP. Large nonpedunculated colorectal lesions (≥ 20 mm).