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## Endoscopic polidocanol foam sclerobanding for the treatment of Grade II-III internal hemorrhoids: The focus of clinical practice

Yu-Yan Zhang, Bing Hu

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### Abstract

We have read the article by Qu *et al* with great interest, as it presents an integration of endoscopic polidocanol foam sclerotherapy with rubber band ligation in patients with Grade II-III internal hemorrhoids. The authors conducted a prospective, multicenter, randomized study to evaluate the long-term symptomatic and endoscopic efficacy of this combined intervention. In this discussion, we focus on the procedural steps of this combined strategy and suggest potential avenues for future research.

**Key Words:** Internal hemorrhoids; Endoscopic therapy; Polidocanol foam; Sclerotherapy; Rubber band ligation; Sclerobanding

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**Core Tip:** Hemorrhoid disease is common, and multiple intervention methods exist. Qu *et al* conducted a prospective, multicenter, randomized study to demonstrate the effectiveness and safety of combining endoscopic sclerotherapy and rubber band ligation in managing Grade II-III internal hemorrhoids. We aim to share our concerns about the specific procedures of this combined strategy and to highlight some potential directions for subsequent research.

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## TO THE EDITOR

Internal hemorrhoids are very common anorectal diseases. Injection sclerotherapy (IS) and rubber band ligation (RBL) are commonly utilized techniques for managing hemorrhoids[1]. Some researchers have observed enhanced outcomes by combining these two techniques, which has been verified by retrospective studies[2,3]. The introduction of flexible endoscopy has improved the maneuverability and convenience of the IS and RBL procedures, enabling direct visualization and documentation. We are interested in the study conducted by Qu *et al*[4], which explored the application of the combined IS and RBL approach within an endoscopic framework.

## COMMENT

This study compared the outcomes of endoscopic IS combined with RBL and simple endoscopic RBL in a cohort of 195 patients diagnosed with Grade II-III internal hemorrhoids. The findings indicated that the combined approach offered prolonged satisfaction and effective alleviation of prolapse recurrence and postprocedural pain within 24 hours. The research methodology employed was multicenter, prospective, randomized, and single-blind, thereby reducing the risks of performance and detection biases. This high-quality evidence is expected to serve as a reliable reference for clinical treatment decision-making. Nevertheless, unresolved issues warrant further discussion and investigation. Despite both methods being combined, variations in the sequence of procedural steps may influence the safety, efficacy, and convenience of operational implementation.

In the retrospective study conducted by Pata *et al*[2], which included 97 cases of Grade II-III internal hemorrhoids with a median follow-up duration of 12 months, the treatment involved RBL followed by IS with 3% polidocanol foam. The results revealed the absence of intraoperative adverse events or severe complications, as well as no instances of mortality or readmission. The authors explained the effectiveness of this procedure; specifically, the 3% polidocanol injection may prevent early slippage of the rubber band, reduce the risk of delayed bleeding, and increase fibrosis at the ligated site, and the preplaced rubber band may prevent the spread of polidocanol foam into the surrounding tissues, thereby reducing significant complications, especially in the anterior area (such as abscess, acute prostatitis, and sepsis).

In this study[2] and another retrospective study[3], IS was implemented first, followed by RBL. Chew *et al*[3] investigated the results of 6739 patients who underwent an injection of 5% phenol in almond oil followed by band ligation. The study revealed a low recurrence rate of 16% and an overall complication rate of 3.1%, with minor bleeding being the major complaint. Qu *et al*[4] implemented a combined strategy endoscopically, utilizing 1% polidocanol foam as the sclerosant, in a prospective, multicenter, randomized study. Compared with simple endoscopic RBL, the combination of endoscopic IS followed by RBL resulted in a lower postprocedural hemorrhoid severity score [2.0 (range: 1.0-3.0) *vs* 3.0 (range: 2.0-3.0),  $P < 0.001$ ], a lower recurrence rate (11.2% *vs* 21.6%,  $P = 0.038$ ) at the 12-month follow-up, and decreased postprocedural pain within the first 24 hours after the procedure. Both studies share the same validity assumption, as submucosal injection aids in elevating the mucosa, facilitating ligation, and preventing aspiration of the muscularis propria. This, in turn, reduces postoperative pain resulting from visceral innervation and promotes increased fibrosis to improve symptom relief.

Nevertheless, endoscopists may harbor concerns during the procedure. Specifically, will the tension escalate postinjection, thereby complicating the application of RBL? Could the compression of the rubber band facilitate the spread of surplus sclerosant to adjacent regions? As delineated in this article, to what extent may the occurrence of postoperative bleeding increase due to mucosal injury induced by the injection?

Moreover, the IS and RBL techniques play a synergistic role in the combination strategy. The different implementation orders may imply different functional principles. Do these differences extend to safety and efficacy? To what degree does this combined strategy contribute to increased procedural time and costs? Additionally, what disparities exist between the trans anal and endoscopic approaches in this procedure? Is the endoscopic approach the optimal method for implementing the combination strategy? Further evidence is needed to address these inquiries, which will assist endoscopists in enhancing their clinical application and practice.

Various sclerosant solutions have been utilized in the management of hemorrhoids. Polidocanol, a local anesthetic with analgesic properties, also facilitates fibrosis. The ideal concentration for hemorrhoid treatment, whether it is 1% (as employed in this study) or 3%[2,5], remains uncertain. This sclerosant shows promise, and determining the optimal concentration and method of application to maximize effectiveness is crucial[6,7].

## CONCLUSION

This study offers high-quality evidence supporting the endoscopic treatment of internal hemorrhoids. We anticipate that the authors will continue to contribute to further research and insights in this area.

## FOOTNOTES

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