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LETTER TO THE EDITOR

Surgical approach for lower postoperative anal stenosis

Amal Diab Ghanem Atalla, Abdulqadir J Nashwan

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Abstract

After anorectal surgery, hemorrhoids frequently lead to chronic issues, particularly in patients with mixed hemorrhoids. Liu *et al* investigated the outcomes of staple removal at the 3- and 9-o'clock positions following modified stapled hemorrhoidopexy (SH) in patients with grade III or IV hemorrhoids. This study included patients who underwent standard or modified SH between January 1, 2015, and January 1, 2020. Key metrics assessed included hospital stay duration, blood loss, operation time, and the incidence of minor or major complications. The findings indicated that the modified SH technique is a safe option for advanced-grade hemorrhoids, resulting in a lower rate of postoperative anal stenosis compared to standard SH. Notably, this technique also showed reduced anal stenosis rates in patients with prior hemorrhoid treatments. While the modified SH demonstrates immediate benefits, further research is necessary to evaluate long-term effects. Despite its advantages, the study's limited sample size restricts the generalizability of the findings, underscoring the need for larger, long-term studies to validate these results. Clinically, the modified SH method appears to significantly reduce the incidence of postoperative anal stenosis, a common concern following typical surgeries. If confirmed by larger trials, this procedure may become the preferred surgical approach for hemorrhoids. In conclusion, the work of Liu *et al* signifies a meaningful advancement in hemorrhoid surgery, enhancing patient safety and outcomes.

Key Words: Hemorrhoids; Prolapse; Postoperative anal stenosis; Modified stapled hemorrhoidopexy; Anal canal

Core Tip: The groundbreaking study by Liu *et al* reveals that stapled hemorrhoidopexy (SH) is a successful surgical treatment for hemorrhoids. A modified SH technique that lowers the likelihood of stenosis is described. The authors completed this altered treatment in patients over 5 years, with minimal stenosis rates, recurrence, and other problems. This implies that the modified approach would be preferable to normal SH to reduce the probability of complications. Despite multiple limitations, such as a small sample size, the study highlights the importance of the modified SH technique in reducing complications of anal stenosis after SH and improving quality and safety for affected patients, while suggesting supplementary research and innovative treatment approaches.

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TO THE EDITOR

Among the most prevalent and often seen chronic anorectal disorders following anorectal surgery are hemorrhoids[1]. These venous clusters form in the lower portion of the rectum by bending, expansion, and congestion of the venous plexus[2]. There are three types of hemorrhoids: internal, external, and mixed. Hemorrhoidal thrombosis-related pain, prolapse, bleeding during or after defecation, and itching are common reasons why patients seek medical attention for their hemorrhoids. Patients who have hemorrhoids that are bothersome and have not responded to nonoperative therapies may need to have additional procedures or surgery. The most successful method of treating hemorrhoids is conventional surgical hemorrhoidectomy, which entails removing hemorrhoidal cushions. Rubber band ligation, harmonic ultrasonic scalpel hemorrhoidectomy, manual anal dilatation, sclerotherapy, cryotherapy, laser hemorrhoidectomy, and ultrasound-guided hemorrhoidal artery ligation are among the procedures. According to the Goligher classification, these techniques are utilized for grade I and II hemorrhoids and are appropriate for outpatient care[3]. However, 5%-10% of individuals show poor response to conservative measures and end up needing hemorrhoidectomies through surgery. These are usually reserved for patients with acute hemorrhoids who have not responded well to other treatments with symptomatic advanced hemorrhoids (grade III and IV)[4].

Although hemorrhoids rarely pose a serious risk to life, there are numerous potential postoperative consequences. If patients know the potential hazards associated with surgery, it is much easier to provide them with options and allow them to make the best decisions. The following possible hazards need to be considered: incontinence, delayed bleeding, anal stenosis, and postoperative discomfort. There have also been reports of soft tissue edema of the skin bridges, bleeding, wound infection, recurrence, and difficulties urinating[5,6].

Prior research has documented that those patients undergoing standard stapled hemorrhoidopexy (SH) experienced initial complications such as bleeding and urinary retention, which were manageable during hospital stays. However, insufficient research has been performed on the long-term effects of SH, particularly the prevalence of anal stenosis and recurrent prolapse[7]. One uncommon long-term consequence of SH is stenosis. It happens an average of 125 days ± 5 days postoperatively and has been reported to occur less than 5% of the time. This could result in over-scarring and stricture formation if excessive tissue is removed from the surgical wounds surrounding the anal canal without creating mucosal bridges between them[8-10].

ASSOCIATION OF MODIFIED SH AND POSTOPERATIVE ANAL STENOSIS

The study conducted by Liu *et al*[11] is a comprehensive and meticulously designed investigation assessing modified SH and postoperative anal stenosis. Patients with grade III or IV hemorrhoids who had surgery at their colorectal facility between January 1, 2015, and January 1, 2020 were examined in this retrospective analysis. The preoperative evaluation comprised clinical and proctological examinations. When it was difficult to perform anoscope examination using a well-lubricated scope and when passing stool during follow-up at the outpatient department, the researchers recorded anal bleeding, postoperative infection, recurrence, symptomatic prolapse, and anal stenosis. These parameters were evaluated before, during, and after surgery. Patients who defecated for longer than half an hour reported difficulty passing stool, and their feces were narrow and fragmented into pellets. Laxatives and high-fiber diets were suggested for these patients. When the outpatient department was unable to relieve the patient's symptoms or dilate the stenosis with an anoscope, additional surgical intervention was scheduled.

Patients with grade III or IV hemorrhoids who had standard or modified SH performed at their colorectal center between January 1, 2015, and January 1, 2020 were included, according to Liu *et al*[11]. Records were kept on the duration of the hospital stay, blood loss, operation time, and occurrence of minor or significant problems. A total of 313 patients (mean age, 53.0 years) and 187 patients (mean age, 50.9 years) who had received standard SH were the subjects of our investigation. Compared to 40.3% of patients in the conventional SH group, 54% of patients in the modified SH group had previous surgeries for hemorrhoids. Five (2.7%) patients with anal stenosis were included in the modified SH group, whereas anal stenosis complications affected twenty-one (6.7%) patients in the regular SH group. Multiple regression

analysis revealed a strong correlation between the modified SH and the rate of postoperative anal stenosis, with values of 0.211 (0.069-0.641) and 0.251 (0.085-0.741). Compared to regular SH, the modified SH approach may have a decreased incidence of postoperative anal stenosis and is a safe surgical procedure for advanced-grade hemorrhoids.

We applaud Liu *et al*[11] for their diligent effort comparing the results of staple removal at the 3- and 9-o'clock positions during modified SH in patients with mixed hemorrhoids. One common and complex complication of SH is postoperative anal stenosis. Hence, finding a method to lower this risk is clinically significant. The authors comprehensively explain the technical adjustments to the typical SH process. This facilitates a more profound understanding and possible replication of the methodology. The results were more consistent and reliable because the same skilled surgical team performed every procedure.

However, it is important to consider the limits and weaknesses of this study. Five hundred cases were enrolled during 5 years, resulting in a modest sample size. Due to the study's single center setup and lack of a control group, bias may have gone unnoticed. Additionally, the duration of the follow-up was brief, and it is possible that many difficulties had not yet materialized at the time of the previous follow-up, which caused the number of complications to be underestimated. Second, there may be some partial exclusion of the confounding effect because there was inadequate recording of information on important confounders of the associated risks, such as family history, obesity, smoking, alcohol consumption, dietary patterns, diabetes mellitus, hypertension, and many other comorbidities. Third, because our hospital is located in the heart of Taipei, Taiwan, which serves a reasonably sized but densely populated and affluent area, we did not address cost-effectiveness. Furthermore, to compare various prolapsed hemorrhoid therapies and investigate these results, large-scale prospective studies are required.

The clinical implications of this work by Liu *et al*[11] are significant despite several limitations. Compared to the standard SH, the improved surgical method appears to dramatically reduce the incidence of postoperative anal stenosis. This is a significant advantage because anal stenosis is a regular and concerning side effect of the typical surgery. The study indicates that the improved approach, with low rates of hemorrhoid recurrence, remained efficient in treating hemorrhoid illness despite the technical adjustments. In addition, the updated method probably improves overall results and quality of life for individuals undergoing hemorrhoid surgery by lowering the chance of stenosis. One significant benefit is avoiding the need for additional surgeries to treat stenosis. For many patients with hemorrhoids, the modified SH may become the go-to surgical procedure if larger trials confirm the low stenosis rates and other encouraging outcomes.

CONCLUSION

For the surgical treatment of patients with grade III and IV protruding hemorrhoids, the modified SH was proven to be a safe and effective procedure. This method produced a lower rate of postoperative anal stenosis than traditional SH, even in individuals who had previously undergone hemorrhoid treatments. Modified SH has numerous immediate advantages and is safe. Nonetheless, more research is required on the long-term effects. This study's description of the modified SH technique marks a significant development in the surgical treatment of hemorrhoids. The authors were able to retain the treatment's overall efficacy in treating hemorrhoids while considerably lowering the risk of the concerning complication of postoperative anal stenosis by implementing particular technical adjustments to the usual approach. This work significantly contributes by showing how to improve hemorrhoid surgery success, quality, and safety. Novel strategies like the one shown here will be crucial in enhancing patient outcomes and quality of life as minimally invasive treatments develop further. This study is a call to action as well as a scientific examination because it opens various new avenues for future research. It is important to carry out a more extensive, multi-center randomized controlled trial to confirm the benefits of the new technique's generalizability and reproducibility in various surgical situations and patient demographics. This would support the steady decline in rates of postoperative stenosis and other positive results. Extending patient follow-up beyond the 5 years described in this study to evaluate the long-term sustainability of the low rates of recurrence and stenosis would offer insightful information on how long-lasting the clinical advantages are. Furthermore, validated patient-reported outcome measures should be included to evaluate the improved technique's effects on quality of life, patient satisfaction, and other subjective endpoints in a more thorough manner. By pursuing these and other lines of inquiry, the medical community can build upon the promising foundation laid by this study, ultimately optimizing the surgical management of hemorrhoid disease and improving quality and safety for affected patients. This makes a substantial contribution to the field and provides insightful evidence with an influence on forthcoming clinical practice, public health policies, and imminent research.

FOOTNOTES

Author contributions: Ghanem Atalla AD and Nashwan AJ wrote the draft and critically reviewed the literature.

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