

Literature review of the role of lateral internal
sphincterotomy when combined with
excisional hemorrhoidectomy

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Excisional hemorrhoidectomy, whether open (Milligan Morgan) or closed (Ferguson) hemorrhoidectomy, is known to be the most efficient treatment for grade III/IV hemorrhoids as it attains the lowest recurrence rate.

Postoperative pain is the most dreaded sequel to hemorrhoidectomy and the main concern for patients with hemorrhoids.

Post-hemorrhoidectomy pain can be attributed to various reasons such as the spasm of the internal anal sphincter (IAS) after exposure of its fibers, insertion of anal pack, damage of nerve endings, mucosal injury, and suturing at the pedicle or below the dentate line.

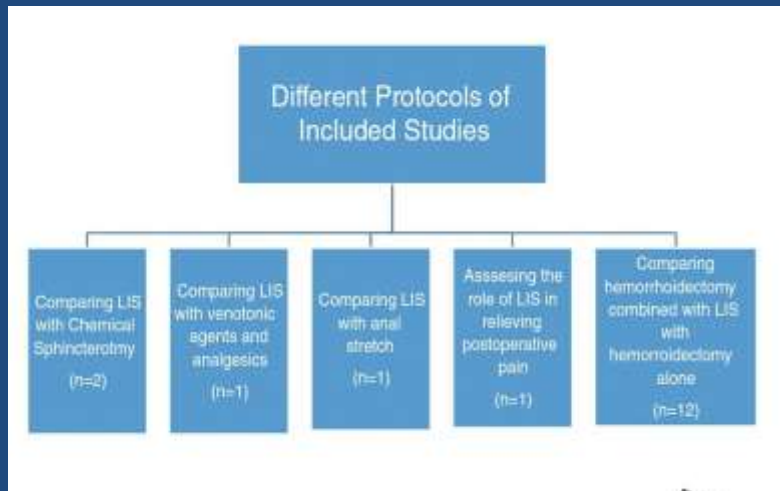
Several methods have been devised to relieve postoperative pain including the use of metronidazole, local anesthetic infiltration, chemical sphincterotomy by application of glycerol trinitrate at the wound or injection of botulinum toxin into the IAS, and surgical internal sphincterotomy.

We conducted a thorough review of the literature searching for the role of LIS when combined with excisional hemorrhoidectomy, and the impact of this combination on postoperative pain, analgesic consumption, continence state, and complications.

Patients and Methods

After an organized literature search in the period of March 1988 to March 2014, we identified all randomized controlled trials comparing hemorrhoidectomy combined with LIS as experimental group with hemorrhoidectomy alone, or combined with other interventions as chemical sphincterotomy

We reviewed full texts of 18 articles, 17 of them were finally included in the current review.



The clinical outcome variables selected for this review included demographic data and characteristics of patients, postoperative pain assessment, analgesic consumption, length of hospital stay, and postoperative complications as: fecal incontinence (FI), urinary retention, anal stenosis, and rectal bleeding.

Studies included in this review comprised a total of 2180 (1214 males, 966 females) patients with median age of 44(range, 33–53)years.

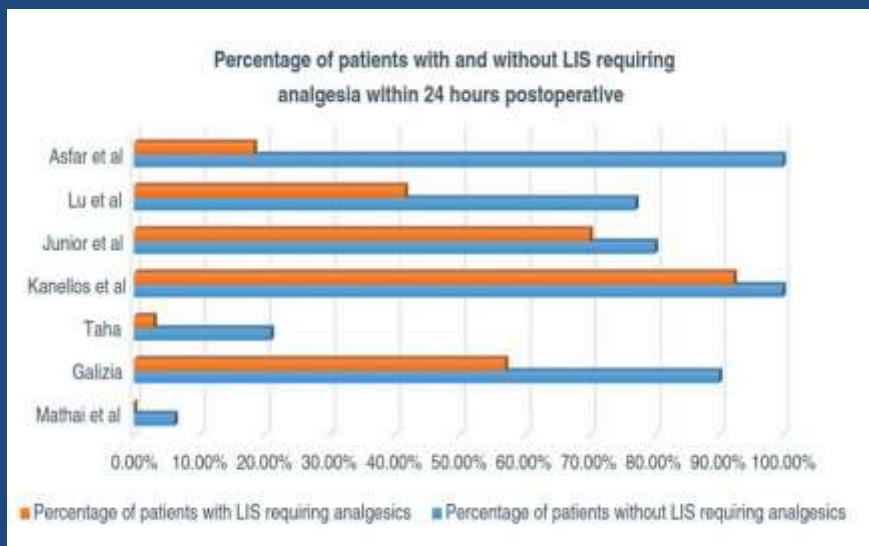
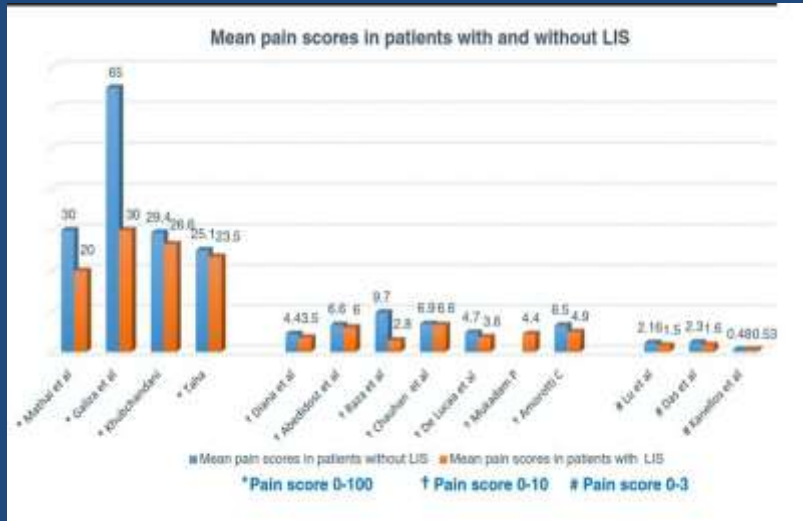
All patients had grade III/IV hemorrhoids; patients with thrombosed or infected hemorrhoids, or other anal pathology as anal fissure or fistula, were excluded from the studies.

All patients underwent Milligan-Morgan (open) hemorrhoidectomy except in one study in which closed hemorrhoidectomy was used. Left LIS was done in 933 (42.7 %) patients with an average length of 0.8–1 cm.

All studies reported lower analgesic consumption after performing LIS with hemorrhoidectomy. However, only four studies found the percentage of patients who required analgesia after LIS to be significantly ($p < 0.05$) lower than the percentage of patients who did not undergo LIS.

Both studies that compared chemical and surgical sphincterotomy concluded superiority of the surgical method in terms of pain relief after hemorrhoidectomy.

Almost all the studies reported lower pain scores after addition of LIS, yet only seven studies observed significant ($p < 0.05$) reduction of mean pain scores.



Eleven of 13 studies that assessed continence state after surgery reported higher incidences of FI after addition of LIS to hemorrhoidectomy. Nonetheless, no significant differences regarding postoperative FI between patients who had LIS and patients who did not.

According to the studies included, FI that complicated LIS was of minor degree, ranging from flatus incontinence to fecal soiling, and temporary with minimum reported duration of 1 week and maximum of 1 year.

The median rate of patients who developed urinary retention after adding LIS to hemorrhoidectomy was 7.7 % with a range (0-60%), whereas the median rate of retention after hemorrhoidectomy alone was 12 % with a range (0 - 61.6 %).

Five studies reported anal stenosis in 0.41–36.4% of patients underwent hemorrhoidectomy without LIS while two studies did not report postoperative anal stenosis.

Conclusion

Lateral internal sphincterotomy effectively reduces postoperative pain and the need for analgesics following excisional hemorrhoidectomy. LIS also manages to decrease incidence of postoperative urinary retention and anal stenosis significantly.

The negative aspect of adding LIS to excisional hemorrhoidectomy is developing fecal incontinence after surgery, which is usually minor in degree, temporary in duration, and can be avoided by proper selection of patients.

THANK YOU