

Analysis of Two Treatment Modalities for Post-surgical Pain after Hemorrhoidectomy

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Abstract

Background: This non-randomized study aimed to compare the efficacy of two pharmacological treatments, "around-the-clock" analgesic treatment (ACAT) and "on-demand" analgesic treatment (ODAT), for managing postoperative pain following hemorrhoidectomy.

Material and Methods: The study, conducted from July 2016 to December 2020, included 5335 hemorrhoidectomy patients. Participants were divided into ACAT (3767) and ODAT (1568) groups. The study was registered at clinicaltrials.gov (NCT04953182).

Results: Patients had a mean age of 47.47 years, with 59.98% males. Postoperatively, 14.13% reported severe pain, 36.49% moderate, 34.28% mild, and 15.09% no pain. ACAT group's maximum pain was 3.04 (VAS), ODAT 4.95 (p; average pain was 0.79 (ACAT) and 1.45 (ODAT). Discharge pain was 0.42 (ACAT) and 0.63 (ODAT) VAS. The ACAT group consistently reported lower levels of pain across all measured instances. Higher BMI and younger age were pain risk factors ($p=.049$, $p<.001$ respectively). ACAT administration resulted in reduced opioid usage, with meperidine showing a 68.38% decrease, morphine 43.57% less, tramadol 46.82% less, oxycodone reduced by 38.74%, and codeine by 53.40%. Additionally, the use of non-opioid analgesics was notably lower in the ACAT group, ranging from 16% to 59% less compared to the ODAT group.

Conclusion: Hemorrhoidectomy induces moderate postoperative pain, with only 14% experiencing severe pain. A fixed schedule multimodal pain regimen, regardless of procedure and anesthesia type, reduces pain from moderate to mild post-hemorrhoidectomy. This approach also decreases opioid and non-opioid analgesic requirements. Higher BMI and younger age are identified as risk factors for elevated postoperative pain.

Key words: postoperative pain, pain management, hemorrhoidectomy, analgesics, opioids, non-opioids