Background and Aims Effective postoperative pain management is a pivotal determinant of recovery following orthopedic surgery. While opioids have traditionally been used for this purpose, their side effects have prompted the search for alternative methods. Transcranial direct current stimulation (tDCS) has emerged as a promising modality for opioid-sparing and pain reduction. To this end, we conducted a meta-analysis to assess the relative efficacy of active tDCS compared to sham tDCS in patients undergoing orthopedic procedures.

Methods PubMed, EMBASE, Scopus, and Cochrane were searched for randomized controlled trials (RCTs) comparing active versus sham tDCS in the postoperative period of orthopedic surgery. We assessed outcomes such as opioid consumption, and pain scores. We used RevMan 5.4 for statistical analyses and evaluated the risk of bias using the RoB-2 tool.

Results Active tDCS was associated with significantly lower opioid consumption (Mean Difference -2.43; 95% CI -4.09 to -0.77; \(p<0.004\); 4 RCTs; 180 patients; figure 1) and lower pain scores (Standard Mean Difference -0.33; 95% CI -0.33 to -0.03; \(p<0.03\); 4 RCTs; 191 patients; figure 2) when compared to sham tDCS.

Conclusions The findings of our meta-analysis suggest that transcranial direct current stimulation (tDCS) holds promise as an adjunctive therapy to opioid-based pain management during the postoperative phase of orthopedic procedures. tDCS has demonstrated potential advantages, such as diminishing opioid consumption and decreasing pain intensity.
Results Liposomal bupivacaine seems to be beneficial during the first 24 hours considering the length of hospital stay and opioid rescue medication. The way pain scores are reported varied among studies and different time assessments were used. The majority of studies reported lower pain scores with liposomal bupivacaine during the first 24h.

Conclusions Our findings suggest that the use of liposomal bupivacaine for local infiltration demonstrates a promising trend towards efficacy, with the potential to decrease both inpatient opioid consumption and antiemetic use following breast surgery. Due to the heterogeneous outcome data captured on pain scores, it is difficult to determine its real impact. We urge societies to support standardized ways to evaluate pain and other outcomes of interest for regional anesthesia.

Abstract OP057 Figure 1  Mean values of visual analogue scale (VAS) at 12 hours post-surgery

Abstract OP057 Figure 2  Mean values of visual analogue scale (VAS) at 24 hours post-surgery

Abstract OP057 Figure 3  Mean values of visual analogue scale (VAS) at 48 hours post-surgery

Conclusions The results of our study indicate that the administration of perineural dexamethasone during BPB may lead to reduction in rebound pain 12 hours after the surgical procedure. However, our analysis did not reveal any statistically significant differences between the experimental and control groups at 24 and 48 hours postoperatively.

Abstract OP058 CRYOANALGESIA DECREASED PREOPERATIVE PAIN SCORES BEFORE TOTAL KNEE ARTHROPLASTY WITH NO DIFFERENCE IN POSTOPERATIVE OPIOID CONSUMPTION

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Please confirm that an ethics committee approval has been applied for or granted: Yes

Application for ESRA Abstract Prizes: I don’t wish to apply for the ESRA Prizes

Background and Aims Total knee arthroplasty surgery is one of the most common orthopedic surgeries performed and are associated with high pain scores and opioid requirements. Novel multimodal pain management is a priority. A gap in the literature exists regarding the effects of cryoanalgesia on pre-BPB rebound pain.

Methods A systematic search of MEDLINE, EMBASE, and Cochrane Library databases was conducted until April 18, 2023. The present study incorporates randomized and non-randomized controlled trials, which evaluate the outcomes of rebound pain in patients undergoing BPB procedures with perineural dexamethasone as compared to control groups. Mean values of visual analogue scale (VAS) at 12, 24, and 48 hours post-surgery were extracted, and mean difference (MD) was calculated. Statistical analyses were performed using RevMan 5.4. Our study is registered in the PROSPERO under protocol CRD42023418469.