



البحث الأول

عنوان البحث باللغة الإنجليزية:

The Analgesic Efficacy of Ultrasound-Guided Bilateral Transversus Thoracic Muscle Plane Block After Open-Heart Surgeries: A Randomized Controlled Study.

نوع البحث:

بحث مشترك منشور مشتق من رسالة علمية و سبق تقييمه في لجنة ترقيّة د. مهدي أحمد عبد الهادي لدرجة استاذ مساعد الدورة (14) بتاريخ 2023/11/17 وتم تقييمه جيد و حصل على 75%.

المشرفين على البحث حسب الترتيب:

د. محمد أحمد حامد ، د. ماجد لبيب بولس ، د. مينا محروس صبحي، د. مهدي أحمد عبد الهادي.

مكان و تاريخ النشر:

Journal of Pain Research: 2022-03, ISSN: 1178-7090.

ملخص البحث الاول باللغة الإنجليزية:

Background: We aimed to evaluate the analgesic efficacy of ultrasound-guided bilateral transversus thoracic muscle plane block after open-heart surgeries.

Methods: Seventy patients aged above 18 years and scheduled for valve replacement or adult congenital via median sternotomy were enrolled in this study. Patients were divided into two groups, randomized by computer-generated random numbers: the block group, which had the ultrasound-guided bilateral transversus thoracic muscle plane block, and the control group, which had a sham block. The primary outcome was total fentanyl consumption in the first 24-hours. The secondary outcomes were pain score, time to the first analgesic request, time to extubation, ICU stays, and hospital stay.

Results: The total fentanyl consumption in the first 24 hours was significantly lower in the block group, with a mean difference of -158.286 (95% CI = (-179.271 to -137.300; $p < 0.0001$)). The time to the first analgesic request was statistically significantly shorter in the non-block group (median 3 hours) than the block group (median 14 hours). During the postoperative period (0.5–24 hours), at rest pain scores were 1.86 units lower in the block group (the estimate was -1.80, 95% CI = -2.14 to -1.45, $t = -10.323$ with $p < 0.0001$). Likewise, pain scores with cough were 3.29 units lower in the block group (the estimate was -3.29, 95% CI = -3.80 to -2.77, $t = -12.703$, $p < 0.0001$).

Conclusion: Bilateral transversus thoracic muscle plane block is a promising and effective technique in reducing opioid consumption and controlling post-sternotomy pain after open-heart surgery via median sternotomy.