



## البحث الثاني

### عنوان البحث باللغة الإنجليزية:

The Analgesic Effect of Ultrasound-guided Bilateral Pectointercostal Fascial Plane Block on Sternal Wound Pain After Open Heart Surgeries.

### نوع البحث:

بحث مشترك منشور مشتق من رسالة علمية و سبق تقييمه في لجنة ترقية د. مهدي أحمد عبدالهادي لدرجة استاذ مساعد الدورة (14) بتاريخ 2023/11/17 وتم تقييمه جيد جدا و حصل على 80%.

### المشرفين على البحث حسب الترتيب:

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### مكان و تاريخ النشر:

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### ملخص البحث الثاني باللغة الإنجليزية:

**Objectives:** We aimed to evaluate the analgesic efficacy of ultrasound-guided bilateral pectointercostal fascial plane block after open heart surgeries.

**Methods:** Seventy patients aged above 18 years and scheduled for on-pump coronary artery bypass grafting or valve replacement or both through median sternotomy were enrolled in this study. Patients were randomly allocated into 2 groups of 35 (block group or control group). The block group had the block performed through 20 ml of a solution of 0.25% bupivacaine plus epinephrine (5 mcg/mL), and the control group received dry needling. The primary outcome was the 24-hour cumulative morphine consumption. The secondary outcomes were time to the first analgesic request, pain score, quality of oxygenation, intensive care unit stays, and hospital stay.

**Results:** The cumulative morphine consumption in the first 24 hours was significantly lower in the block group, with a mean difference of -3.54 (95% confidence interval= -6.55 to -0.53; P =0.015). In addition, the median estimate time to the first analgesic request was significantly longer in the block group than in the control group. Finally, during the postoperative period (4 to 24 h), mean sternal wound objective pain scores were, on average, 0.58 units higher in the block group.

**Conclusion:** pectointercostal fascial block is an effective technique in reducing morphine consumption and controlling poststernotomy pain after cardiac surgeries. Also, it may have a role in better postoperative respiratory outcomes.