Efektivitas Penambahan Blok Transversus Thoracis Muscle Plane Bilateral pada Anestesia Bedah Jantung Terbuka: Kajian terhadap Konsumsi dan Waktu Pertama Pemberian Morfin Pascabedah, Waktu Ekstubasi, Konsentrasi IL-6 dan Kortisol Plasma Perioperatif = Effectiveness of the Addition of Bilateral Transversus Thoracis Muscle Plane Block in Anesthesia for Open-Heart Surgery: A Study of Postoperative Morphine Consumption and First-Dose Time, Extubation Time, Perioperative Plasma Concentration of IL-6 and Cor

A.A. Gde Putra Semara Jaya, author

Abstrak

Latar Belakang. Bedah jantung terbuka mengakibatkan nyeri dan respons stres pascabedah yang dapat memberikan dampak buruk bagi pasien. Blok transversus thoracis plane merupakan blok interfascial dalam di area parasternal untuk mengatasi nyeri sternotomi. Penelitian ini bertujuan untuk membandingkan efektivitas penambahan blok transversus thoracis muscle plane bilateral dalam mengurangi nyeri dan respons stres pascabedah jantung terbuka terhadap kontrol. Metode. Penelitian ini adalah uji klinis terkontrol acak tersamar ganda. Tiga puluh empat subjek yang memenuhi syarat yang menjalani operasi jantung elektif antara September 2020 dan Agustus 2001 secara acak dimasukkan ke kelompok blok TTP atau kontrol. Penelitian membandingkan beda rerata konsumsi morfin 24 jam pascabedah, waktu pertama dosis morfin pascabedah, waktu ekstubasi, konsentrasi plasma IL-6 dan kortisol pada 24 jam dan 48 jam pascabedah. Penelitian juga ingin mengetahui konsumsi fentanil intraoperatif, waktu pertama opioid rescue intraoperatif, komplikasi, efek samping opioid, dan lama rawat inap. Hasil. Konsumsi morfin 24 jam pertama pascabedah lebih tinggi secara bermakna ($p<0,001$) pada kelompok kontrol dibandingkan kelompok blok TTP. Waktu pertama pemberian morfin pascabedah lebih lama secara bermakna ($p<0,001$) pada kelompok blok TTP dibandingkan kelompok kontrol. Waktu ekstubasi tidak berbeda bermakna antara kelompok blok TTP dan kelompok kontrol. Konsentrasi plasma IL-6 dan kortisol tidak berbeda bermakna antara kelompok blok TTP dan kelompok kontrol pada 24 jam dan 48 jam pascabedah. Kesimpulan. Penambahan blok transversus thoracis muscle plane bilateral tidak terbukti lebih efektif dalam mengurangi nyeri dan respons stres pascabedah jantung terbuka dibandingkan dengan kontrol.

.....Background. Open-heart surgery is a major surgery that causes postoperative pain and surgical stress response, contributing further to postoperative complications and morbidity. Transversus thoracis muscle plane block is a deep interfascial block in the parasternal area to treat sternotomy pain. This study aimed to compare the effectiveness of bilateral transversus thoracis muscle plane blocks in reducing pain and stress response after open-heart surgery versus control. Methods. This is a prospective, double-blind, randomized control trial. Thirty-four eligible subjects who underwent elective cardiac surgery between September 2020 and August 2001 were randomly assigned to the TTPB or control group. The primary outcomes were the different means of 24-hour postoperative morphine consumption, time of first postoperative morphine dose, extubation, postoperative plasma levels of IL-6 and cortisol at 24 hours and 48 hours after surgery. The secondary outcomes were intraoperative fentanil consumption, time of first intraoperative opioid rescue, complication, opioid side effects, and length of stay. Results. The 24-hour postoperative morphine

consumption was significantly higher ($p<0.001$) in the control group than in the TTPB group. The time of first postoperative morphine dose was significantly longer ($p<0.001$) in the TTPB group than in the control group. Extubation time was not statistically different between the TTP block group and the control group. Plasma levels of IL-6 and cortisol were not statistically different between the TTP block group and the control group at 24 hours and 48 hours after surgery. Conclusion. The bilateral transversus thoracis muscle plane blocks were not shown to be more effective in reducing pain and stress response after open-heart surgery compared to controls.