

Efektivitas blok quadratus lumborum dibandingkan dengan blok epidural sebagai manajemen nyeri pascabedah laparoskopi renal: penelitian terhadap konsentrasi IL-6 dan hs-CRP pada pasien donor ginjal = Comparison of IL-6 and CRP Concentration between Quadratus Lumborum and Epidural Block among living kidney donors: a randomized controlled trial

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Abstrak

Teknik anestesia yang adekuat menghasilkan analgesia pascabedah yang cukup dan menurunkan respon stres pasien. Hal ini dapat menurunkan morbiditas dan mortalitas yang berhubungan dengan gangguan imunologis, seperti infeksi, penyembuhan luka berkepanjangan, dan sepsis. Studi ini bertujuan untuk membandingkan derajat nyeri pascabedah, kadar interleukin-6 (IL-6) dan C-reactive protein (CRP) sebagai marker respon stress, dan durasi pemakaian kateter urin antara epidural kontinu dan blok Quadratus Lumborum (QL) sebagai teknik analgesia pascabedah pada donor ginjal. Enam puluh dua pasien dibagi secara acak menjadi dua kelompok sama rata: epidural kontinu dan blok QL. Grup blok QL mendapatkan bupivakain 0,25% sebanyak 20 ml dan grup epidural mendapatkan bupivakain 0,25% 6 ml/jam kontinu melalui kateter. Menjelang ekstubasi, grup blok QL mendapatkan blok QL bilateral dengan dosis yang sama sedangkan grup epidural mendapatkan bupivakain 0,125% 6 ml/jam kontinu melalui kateter. Sampel darah diambil untuk membandingkan kadar IL-6 dan CRP setelah intubasi (preoperatif), segera setelah operasi, 24 jam serta 48 jam setelah operasi. Nyeri pascabedah diukur menggunakan numerical rating scale (NRS) di ruang pulih dan 24 jam pascabedah. Kebutuhan morfin dan durasi pemakaian kateter juga dicatat pascabedah. Efek samping yang muncul selama 24 jam dicatat. Data dianalisis menggunakan uji t tidak berpasangan atau uji Mann-Whitney. Tidak ada perbedaan yang ditemukan antarkelompok pada derajat nyeri pasca bedah, kadar plasma IL-6 setelah operasi atau 24 jam setelah operasi ($p=0,785$ dan $p=0,361$, secara berurutan) meskipun rerata kadar IL-6 24 jam setelah operasi lebih rendah pada grup blok QL dibandingkan kelompok epidural kontinu. Durasi pemakaian kateter urin pada blok QL lebih singkat daripada epidural. Kadar CRP tidak berbeda signifikan antara kedua kelompok baik setelah operasi maupun 48 jam setelah operasi ($p=0,805$ dan $p=0,636$, secara berurutan). Durasi pemakaian kateter urin pada blok QL lebih singkat daripada epidural. Kedua teknik epidural kontinu dan blok QL menunjukkan analgesia pascabedah yang sebanding pada pasien donor ginjal yang menjalani laparoskopi nefrektomi.

.....An adequate anesthesia technique generates appropriate postoperative analgesic properties and decreases the patient's stress response. This will lead to decreased morbidity and mortality associated with immunology disturbances, such as infection, prolonged wound healing, and sepsis. The aim of this study was to compare postoperative pain level, interleukin-6 (IL-6) and C-reactive protein (CRP) concentrations, as the markers of the stress response, and duration of catheter usage between continuous epidural and quadratus lumborum (QL) block as postoperative analgesia techniques among living kidney donors. Sixty-two patients were randomly divided into two equal groups: continuous epidural and QL block. A group received bilateral QL block with 20 mL of bupivacaine 0.25% and the other received 6 mL/hour of bupivacaine 0.25% continuously via an epidural catheter. Prior to extubation, the QL block group received

bilateral QL block with the same dose and the continuous epidural group was administered with 6 mL/hour of bupivacaine 0.125%. Blood samples were drawn to compare IL-6 and CRP concentrations after intubation (preoperatively), directly after surgery, 24 hours postoperatively, and 48 hours postoperatively. Postoperative pain was measured with the numerical rating scale (NRS). Morphine requirement and duration of catheter usage were also measured postoperatively. Side effects within 24 hours postoperatively were noted. Data were analyzed with independent t-test or Mann-Whitney test. No difference was observed between the groups in the postoperative pain level, plasma concentration of IL-6 either after surgery or 24 hours postoperatively ($p=0.785$ and $p=0.361$, respectively) although the mean IL-6 concentration 24 hours postoperatively was lower in the QL block group than in the continuous epidural group. CRP concentration was not significantly different between the groups either after surgery or 48 hours postoperatively ($p=0.805$ and $p=0.636$, respectively). The duration of catheter usage is significantly shorter in QL Block. Both continuous epidural and QL block techniques showed comparable postoperative analgesic properties among living kidney donors undergoing laparoscopic nephrectomy.