

INTISARI

Latar belakang: Anestesi spinal merupakan teknik anestesi yang paling sering digunakan pada seksio sesarea. Meski teknik ini mudah dilakukan dengan risiko mortalitas maternal yang rendah, kejadian hipotensi pasca anestesi spinal cukup tinggi pada pasien obstetri dan masih menjadi fokus penelitian dan perdebatan selama bertahun-tahun, namun sejauh ini tidak didapati tatalaksana tunggal yang dapat mengatasi efek ini. Penelitian terbaru banyak membahas topik terkait efektifitas anestesi spinal dosis rendah (*low dose*), waktu dan jenis terapi cairan dan berbagai regimen vasopresor.

Tujuan: Penelitian ini bertujuan untuk membandingkan efek hemodinamik maternal anestesi spinal dengan bupivakain dosis rendah dan bupivakain dosis konvensional pada pasien yang menjalani seksio sesarea elektif.

Metode: Suatu penelitian prospektif kasus kontrol, acak tersamar tunggal dilakukan pada 56 pasien yang menjalani seksio sesarea elektif di Instalasi Bedah Sentral RSUD. Dr. Zainoel Abidin Banda Aceh dan RSUD. Sultan Iskandar Muda Nagan Raya. Pasien dibagi menjadi 2 kelompok berdasarkan obat anestesi spinal yang diberikan yaitu kelompok CD (kelompok *conventional dose* yang mendapat bupivakain 10 mg dan *fentanyl* 25 µg) dan kelompok LD (kelompok *low dose* yang mendapat bupivakain 6.5 mg ditambah *fentanyl* 25 µg dan morfin 80 µg) kemudian dibandingkan respon hemodinamik maternal antara kedua kelompok yang meliputi kejadian hipotensi (penurunan tekanan darah sistolik > 20% nilai basal atau tekanan darah sistolik < 100 mmHg), episode hipotensi dan kebutuhan vasopresor.

Hasil: Kejadian hipotensi pada kelompok CD tidak berbeda bermakna dengan kelompok LD [18 (66.7%) vs 14 (50.0%), $p=0.210$], akan tetapi episode hipotensi secara bermakna lebih tinggi pada kelompok *conventional dose* (1.33 ± 1.33 vs 0.68 ± 0.82 , $p=0.032$), demikian pula kebutuhan vasopresor secara bermakna lebih besar pada kelompok *conventional dose* [10 (0-40) vs 2.5 (0-30), $p=0.043$].

Simpulan: Anestesi spinal *low dose* menggunakan bupivakain 6.5 mg ditambah *fentanyl* 25 µg dan morfin 80 µg tidak berbeda bermakna dengan *conventional dose* bupivakain 10 mg dan *fentanyl* 25 µg terkait kejadian hipotensi, namun berhubungan dengan episode hipotensi dan kebutuhan vasopresor yang lebih rendah.

Kata kunci: seksio sesarea, anestesi spinal, hipotensi, *conventional dose*, *low dose*, vasopresor

ABSTRACT

Background: Spinal anaesthesia is the most common technique for caesarean section. Despite the simplicity and lower maternal mortality risk, hypotension following spinal anaesthesia is a common problem among obstetric patients and has remained a focus of research and controversy for decades. Prevention and treatment of post spinal anaesthesia induced hypotension in caesarean delivery has been frequently investigated but no single measure for sufficient treatment was identified so far. Current literature discusses the efficacy of low dose spinal anaesthesia, timing and solution of fluid therapy and various vasopressor regimen.

Objective: We aimed to compare hemodynamic effect of low dose and conventional dose bupivacaine spinal anaesthesia in patient undergoing elective caesarean section.

Methods: A prospective, randomized, single blind, case control study was carried out in 56 patients undergoing elective caesarean section in spinal anaesthesia at Central surgical Unit of RSUD dr. Zainoel Abidin banda Aceh and RSUD Sultan Iskandar Muda Nagan Raya. Patients were randomized into 2 groups depending on intrathecal drug received as Group CD (conventional dose group-received 10 mg hyperbaric bupivacaine and 25 µg fentanyl) and Group LD (low dose group-received 6.5 mg hyperbaric bupivacaine with 25 µg fentanyl and 80 µg morphine) and compared regarding maternal haemodynamic responses as incidence of hypotension (fall in systolic blood pressure > 20% from baseline or systolic blood pressure less than 100 mmHg), episode of hypotension, and vasopressor requirement.

Result: The incidence of hypotension in Group CD not significantly different to Group LD [18 (66.7%) vs 14 (50.0%), $p=0.210$], but hypotension episodes were significantly higher in conventional dose group (1.33 ± 1.33 vs 0.68 ± 0.82 , $p=0.032$). Hence vasopressor requirement was also significantly higher in conventional dose group [10 (0-40) vs 2.5 (0-30), $p=0.043$].

Conclusion: Low dose spinal anaesthesia using 6.5 mg bupivacaine with 25 µg fentanyl and 80 µg morphine were comparable to conventional dose of 10 mg bupivacaine and 25 µg fentanyl according to incidence of hypotension but associated with less episode of hypotension and reduced vasopressor requirement.

Keywords: caesarean section, spinal anaesthesia, hypotension, conventional dose, low dose, vasopressor