

# Kejadian hipotensi pada anestesia spinal untuk prosedur percutaneous nephrolithotomy: perbandingan antara bupivakain 0,5% hiperbarik 12,5 mg ditambah fentanil 25 mcg dengan bupivakain 0,5% hiperbarik 15 mg ditambah fentanil 25 mcg = Incidence of hypotension in spinal anesthesia for percutaneous nephrolithotomy: comparison between 0,5% hyperbaric bupivacaine 12,5 mg plus fentanyl 25 mcg versus hyperbaric bupivacaine 15 mg plus fentanyl 25 mcg

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## Abstrak

**LATAR BELAKANG :** Percutaneous nephrolithotomy (PCNL) adalah salah satu terapi batu ginjal dan batu ureter yang minimal-invasif. Di Rumah Sakit Cipto Mangunkusumo anestesia spinal merupakan pilihan anestesia utama untuk PCNL, namun regimen anestesia spinal yang digunakan masih bervariasi, dan kejadian hipotensi masih cukup besar. Penelitian ini membandingkan angka kejadian hipotensi pada PCNL dengan anestesia spinal antara dua regimen, yaitu bupivakain 0,5% hiperbarik 12,5 mg ditambah fentanil 25 mcg dan bupivakain 0,5% hiperbarik 15 mg ditambah fentanil 25 mcg.

**METODOLOGI:** Dua puluh dua pasien PCNL dewasa, ASA I-III, tanpa kelainan kardiovaskuler, dirandomisasi menjadi kelompok I yang mendapat bupivakain 0,5% hiperbarik 12,5 mg ditambah fentanil 25 mcg dan kelompok II yang mendapat bupivakain 0,5% hiperbarik 15 mg ditambah fentanil 25 mcg. Anestesia spinal dilakukan dalam posisi duduk, pungsi di L3-4/L4-5, kemudian pasien telentang lalu derajat blok sensorik dan motorik dinilai. Sebelum pasien diposisikan prone, derajat blok sensorik dan motorik dinilai lagi. Tekanan darah diperiksa pada menit ke-3, 6, 9, 12, 15, 20, 30, 40, 50, dan 60 setelah injeksi obat spinal.

**HASIL:** Angka kejadian hipotensi pada kelompok I adalah 33% sedangkan pada kelompok II 60% ( $p=0,391$ ). Tidak terdapat perbedaan profil blok sensorik dan motorik pada kedua kelompok. Satu pasien di kelompok II memerlukan tambahan fentanil intravena 100 mcg pada menit ke-70.

**SIMPULAN :** Angka kejadian hipotensi pada kedua kelompok subyek penelitian tidak berbeda bermakna.

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**BACKGROUND:** Percutaneous nephrolithotomy (PCNL) is a minimally-invasive therapy for treatment of upper ureteral and renal stones. In Cipto Mangunkusumo Hospital, spinal anesthesia is the major option of anesthesia for PCNL, but spinal anesthesia regimens used are still varied, and the incidence of hypotension is still quite large. This study compared the incidence of hypotension in the PCNL with spinal anesthesia between the two regimens, 0.5% hyperbaric bupivacaine 12.5 mg plus fentanyl 25 mcg versus 0.5% hyperbaric bupivacaine 15 mg plus fentanyl 25 mcg.

**METHODOLOGY:** Twenty-two adult PCNL patients, ASA I-III, without cardiovascular abnormalities, were randomized into group I, which received 0.5% hyperbaric bupivacaine 12.5 mg plus fentanyl 25 mcg and group II received 0.5% hyperbaric bupivacaine 15 mg plus fentanyl 25 mcg. Spinal anesthesia performed in sitting position, puncture in L3-4/L4-5, then the patient were positioned supine and the degree of sensory and motor block were assessed. Before the patient were positioned prone, the degree of sensory and motor block were assessed again. Blood pressure checked at minute 3, 6, 9, 12, 15, 20, 30, 40, 50, and

60 after injection of spinal regiments.

**RESULTS:** The incidence of hypotension in group I was 33% and in group II was 60% ( $p = 0.391$ ). There were no differences in sensory and motor block profiles in both groups. One patient in group II requires additional intravenous fentanyl 100 mcg in the 70th minute.

**CONCLUSION:** The incidence of hypotension in both groups of study subjects did not differ significantly.