

Hemodynamic impact of spinal anesthesia with levobupivacaine 0.75% 12 mg vs 8 mg in patients undergoing lower limb orthopedic surgery. A retrospective study.

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INTRODUCTION: Intraoperative hypotension is common after spinal anesthesia in orthopedic lower limb surgery. IV crystalloids and vasopressors can be used to attenuate this complication, but large amounts of IV fluid may be dangerous for patients with cardiac dysfunction (1). A combination of fluids and vasopressors given in the first 5-10 minutes seems to be the most widespread treatment for hypotension after spinal anesthesia in elderly patients (2). Doses of levobupivacaine less than 10 mg seem to reduce severity and incidence of hypotension (3).

PURPOSE: We compared hemodynamic effects of spinal anesthesia with levobupivacaine 0.75% 8 mg and 12 mg according to the episodes of hypotension and bradycardia in patients undergoing lower limb orthopedic surgery.

METHODS: We analyzed retrospectively anesthetic and hemodynamic variables of 22 patients (mean age 70 yr) undergoing lower limb orthopedic surgery from October 2017 to February 2018. Patients were divided in two groups depending on spinal levobupivacaine 0.75% doses: Group 1 (G1: 12 mg) and Group 2 (G2: 8 mg). Sensory block height level, bromage scale and hemodynamic variables were collected.

RESULTS: are reported in tab1. Hemodynamic events and ephedrine/fluid administration did not differ between two groups. Four patients of G1 and one patient of G2 had hemodynamic events with a mean arterial pressure < 60 mmHg and/or heart rate < 60 bpm.

CONCLUSIONS: Our data demonstrate that there is no statistically difference between the two doses of levobupivacaine. These preliminary results suggest that hemodynamic events are lower in G2 group. We can assume that the dose of 8 mg of levobupivacaine is adequate to perform a safe anesthesia for elderly patients.

It is necessary to collect more data increasing sample size because the trial is underpowered at the moment.

	<i>Group 1</i>	<i>Group 2</i>
Patients	11	11
Thermic level $\geq T_6$	2 (18%)	0
Hemodynamic events	4 (36%)	1 (9%)
Ephedrine bolus	4 (36%)	4 (36%)
Fluid bolus	5 (45%)	4 (36%)

Table 1: Main characteristics of the population