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Impact of Antihypertensive Medication on Perioperative Period

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Introduction: There are only sparse data on antihypertensive medication management during the perioperative period. The literature is not clear concerning their hemodynamic effects and their optimal use during this particular time.

Objective: To evaluate the impact of antihypertensive medication on blood pressure (BP) and vasopressor use during the perioperative period.

Methods: This retrospective cohort study included all patients using antihypertensive therapy seen at the internal medicine preoperative clinic between November 2005 and November 2006 who were undergoing elective surgery that needed hospitalization for more than 1 day. We recorded patients' characteristics, medication used at home and during the perioperative period, surgery and anesthesia types, all hemodynamic data before and during surgery, and vasopressor use. Patients with incomplete files were excluded from final analysis. Results were analyzed with the chi-square test and the t-test. We considered a *P* value of $< .05$ as statistically significant.

Results: Of the 949 patients that we reviewed, 371 met inclusion criteria. Patients were then divided into 2 groups. The first group included hypertensive patients who did not take their antihypertensive therapy on the morning of the surgery ($n = 91$), and the second group was composed of hypertensive subjects who took their antihypertensive medication before surgery ($n = 280$). Analysis showed that there was no significant difference between group 1 and group 2 for the incidence of perioperative hypotension (defined as systolic BP < 90 mm Hg) (58.2% vs 46.4%, $P = .07$) or for vasopressor medication use (71% vs 79%, $P = .12$). The combined end point of perioperative hypotension or vasopressor perfusion was not different between groups (65% vs 59%, $P = .29$). In addition, we could not show a difference in perioperative BP depending on the class of antihypertensive medication taken the morning of surgery.

Conclusion: The administration of antihypertensive therapy on the morning of surgery did not cause significant variations in perioperative BP and did not increase the utilization of vasopressor therapy during the perioperative period.