Continuous spinal anesthesia in patients with SEVERE AORTIC STENOSIS: could it be a safe option?

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Introduction

Aortic stenosis (AS) is a major risk factor for adverse outcomes during the perioperative period in patients undergoing non-cardiac surgery, thus requiring a careful management. Neuroaxial blockade is relatively contraindicated in patients with AS, that's why evidence about this subject is so sparse. We describe two cases of patients with severe AS that underwent orthopedics surgery under continuous spinal anesthesia (CSA).

Case Report 1

- . Male, 91 years old, ASA IV
- . Urgent fixation of a trochanteric femur fracture
- . Severe aortic stenosis, congestive heart failure, dyslipidaemia, history of ischemic cerebral stroke and cardiac tamponade
- . Standard ASA monitoring and invasive blood pressure measurement
- . CSA at L4-5
- . 2,5mg of 0.5% Levobupivacaine
- . Additional doses of 1,5mg and 2,5mg were given 30 and 45min after the initial dose
- . The patient remained hemodynamically stable and the procedure went uneventful
- . No report of cardiovascular complications postoperatively

Case Report 2

- . Female, 77 years-old, ASA IV
- . Total hip replacement after femoral neck fracture
- . Severe aortic stenosis, hypertension, chronic renal disease, dyslipidemia and hyperuricemia
- . Standard ASA monitoring and invasive blood pressure measurement
- . CSA at L4-5
- . 4mg of 0.5% Levobupivacaine+ 0.003mg of sufentanil
- . The patient remained hemodynamically stable and the procedure went uneventful
- . No report of cardiovascular complications postoperatively

Discussion

Classically, general anesthesia (GA) is recommended over neuroaxial anesthesia in cases of AS. Nonetheless, using a catheter-based neuroaxial anesthesia allowing individual drug dose titration, it is possible to achieve a favorable hemodynamic profile. Moreover, it may even offer advantages over GA. In addition, an appropriate invasive blood pressure monitoring offers early and more accurate recognition of hemodynamic changes, allowing prompt medical intervention.

Conclusion

Patients with severe AS can be safely managed with continuous spinal anesthesia, with minimal hemodynamic disturbances.