26309 - COMBINED REGIONAL/ GENERAL ANESTHESIA FOR CAROTID SURGERY

Daniel Audy MD, FRCPC, Pierre Drolet, MD FRCPC; Michel Cadieux, MD MHPE FRCPC; Rafik Ghali, Hôpital Maisonneuve-Rosemont, Montréal, QUÉBEC, Canada

INTRODUCTION: Many anaesthesiologist are reluctant to rely on regional anesthesia alone during carotid endarterectomy (CEA). The goal of this prospective double-blind study was to evaluate if some benefits reported with regional anesthesia, namely a more stable operative course and lower analgesic requirements, can be expected from adding a superficial cervical plexus block (SCPB) to a general technique.¹

METHODS: After obtaining approbation from the IRB and each participant, 50 patients undergoing CEA under general anesthesia were divided randomly in two groups. Each group received a SCPB either with 20 cc of ropivacaine 0.5%(B) or NaCl 0.9%(C). The anesthesiologist in charge of the case was unaware of the patient's group. Anesthesia was induced with fentanyl 3 mcg/kg, midazolam 100 mcg-kg-1, Propofol 0-1 mg-kg-1 and rocuronium 0.9mg-kg-1. After loss of consciousness, a Proseal laryngeal mask airway (PLMA) was inserted. A PLMA was used in order to reduce hemodynamic variations associated with airway management.² If the PLMA did not provide a satisfactory airway, the patient was excluded from the study. Anesthesia was maintained with isoflurane (End-tidal:0.4-0.8%) and rocuronium 0.3mg-kg-1. The anesthesiologist in charge was allowed to administer, at his discretion, fentanyl 0.5 mcg-kg-1, esmolol 0.5 mg-kg-1 or nitroglycerine 1 mcg-kg-1 to lower heart rate or blood pressure. Phenylephrine 1mcg-kg-1 or ephedrine 100 mcg-kg-1 were used to correct hypotension. Each time one of the vasoactive drugs or fentanyl was administered, it was counted as an intervention. Postoperative analgesic data, and administration of vasoactive drugs and fentanyl during surgery, were recorded.

RESULTS: Seven patients (B:4; C:3) were excluded because PLMAs did not provide a satisfactory airway before beginning surgery. Another patient from group B was brought back to the OR because of a neck hematoma, only the data of his first surgery were kept. Demographic data were similar between the two groups. Patients in group B required less fentanyl during surgery (B:107±92 vs C:191±123 mcg, p=0.015). They also needed fewer pharmacological interventions aimed at correcting hemodynamics variations (B:5.4±3.9 vs C:8.5±5.7, p=0.048). These interventions mostly aimed at decreasing blood pressure or heart rate. Morphine requirements in the PACU [B:0(0-8) vs C:2(0-14 mg), NS] and codeine requirements on the surgical ward during the first 24 hours [B:30(0-120) vs C:30(0-120), NS] were low and did not differ between groups, but the time to first analgesic request was longer in group B (figure).

DISCUSSION: Adding a SCPB during CEA under general anesthesia is associated with easier hemodynamic control during surgery and a longer postoperative interval before first analgesic request. Also, since the PLMA was deemed inadequate in 14% of the participants, its role in CEA may need to be reassess.

REFERENCES:

- 1-Cardiovasc Surg 2000;8:429-35
- 2-J Clin Anesth 1998;10:54-7