ANESTHETIC MANAGEMENT OF A PATIENT WITH CADASIL SYNDROME

Authors: Costa-Martins, I; Carreteiro, J., Carvalho, P.
Institute: Centro Hospitalar de Lisboa Ocidental, E.P.E.

BACKGROUND

Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) is a rare but the most common genetic cause of ischemic strokes. ⁽¹⁾⁽²⁾ It affects 500 families worldwide, mainly European. ⁽²⁾ Few cases of anesthetic management were published.^{(1) (2)}

CASE REPORT

Patient

- Male, 48 years old, ASA III
- History of coronary angioplasty, hypertension and asymptomatic CADASIL syndrome
- Aspirin was stopped 5 days before surgery

Surgery

- Partial parotidectomy

ANESTHETIC TECHNIQUE

MONITORING

INDUCTION

MAINTENANCE

EXTUBATION

Balanced General Anesthesia

Standard ASA + BIS

- Remifentanil 1 mcg/Kg/min
- Propofol
- Sevoflurane
- Without muscle relaxation

- Remifentanil 0,05-0,25 mcg/Kg/min
- Desflurane
- MAP 60-70 mmHg and HR 50-60 bpm
- EtCO₂ 27-34 mmHg
- Surgeons repeatedly monitored facial nerve function

- Uneventful

Follow-up

Anti-platelet therapy was reintroduced after 24h of surgery and the patient was discharged at 3rd postoperative day. At 1 month reevaluation there were no complications.

DISCUSSION

CADASIL syndrome is a progressive non-arteriosclerotic arteriopathy with variable presentation: migraine, stroke, dementia, cognitive impairment and neuropsychiatric symptoms. ^{(1) (2)}
Cerebral hypoperfusion appears early and cerebral autoregulation and reactivity to carbon dioxide may be impaired. ^{(1) (2)} Most patients take anti-platelet medication. ⁽¹⁾⁽²⁾ Cardiovascular risk factors hasten disease's progression.⁽²⁾

When anesthetising these patients, the main goal is the prevention of cerebral ischemia or vasospastic events by maintaining normal levels of blood pressure, normocapnia and normovolemia.^{(1) (2)}
Whenever locoregional anesthesia is a possibility, it can be safely performed.⁽¹⁾

LEARNING POINTS

Anesthetic management of CADASIL syndrome should focus on maintenance of adequate cerebral perfusion while preventing ischemic and vasospastic events. Be aware of common use of anti-platelet medication.

References:
1 – Chon, Lee. Anesthetic management of a patient with CADASIL syndrome. Anesthesiology and Pain Medicine. 2012; 7.
2- Errando et al. Anesthetic management of a patient diagnosed with CADASIL. Anestesiología, Reanimación y Terapéutica del dolor. 2012; 59.