Use of dexmedetomidine for prophylactic analgesia and sedation in patients with delayed extubation after craniotomy

SCIENCE

Abstracts

Key Take-Away:

Acute pain and agitation are common in patients with delayed extubation after craniotomy which can lead to brain edema, intracranial hemorrhage, and even ischemia if untreated. Dexmedetomidine is useful for sedation in patients with delayed extubation after craniotomy as revealed from this study.

A randomized trial conducted to evaluate the efficacy and safety of dexmedetomidine for prophylactic analgesia and sedation in patients with delayed extubation after craniotomy.

ABSTRACT:

Background:

A randomized trial conducted to evaluate the efficacy and safety of dexmedetomidine for prophylactic analgesia and sedation in patients with delayed extubation after craniotomy.

Methods:

From June 2012 to July 2014, 150 patients with delayed extubation after craniotomy were randomized 1:1 and were assigned to the dexmedetomidine group that received a continuous infusion of 0.6 μg/kg/h (10 μg/mL) or the control group that received a maintenance infusion of 0.9% sodium chloride for injection.

The mean percentage of time under optimal sedation (SAS3-4), the percentage of patients who required rescue with propofol/fentanyl, and the total dose of propofol/fentanyl required throughout the course of drug infusion, as well as VAS, HR, MAP, and SpO2 were recorded.

Expand section

Results:

The percentage of time under optimal sedation was significantly higher in the dexmedetomidine group than in the control group (98.4%±6.7% vs. 93.0%±16.2%, P=0.008).

The VAS was significantly lower in the dexmedetomidine group than in the control group (1.0 vs. 4.0, P=0.000). The HR and mean BP were significantly lower in the dexmedetomidine group than in the control group at all 3 time points (before endotracheal suctioning, immediately after extubation, and 30 min after extubation). No significant difference in SpO_2 between the 2 groups. For hemodynamic adverse events, patients in the dexmedetomidine group were more likely to develop bradycardia (5.3% vs. 0%, P=0.043) but had a lower likelihood of tachycardia (2.7% vs. 18.7%, P=0.002).

Expand section

Conclusion:

Dexmedetomidine may be an effective prophylactic agent to induce sedation and analgesia in patients with delayed extubation after craniotomy.

The use of dexmedetomidine (0.6 μg/kg/h) infusion does not produce respiratory depression but may increase the incidence of bradycardia.

Source:	Journal of Neurosurgical Anesthesiology
Link to the source:	http://journals.lww.com/jnsa/Abstract/2017/04000/Use_of_Dexmedetomidine_...
The original title of the article:	Use of dexmedetomidine for prophylactic analgesia and sedation in patients with delayed extubation after craniotomy: A randomized controlled trial
Authors:	Zhong-Hua et al.

Expand section