A0045 Anesthetic Management of Patients Presenting with Vein of Galen Malformation for Endovascular/ Surgical Treatment: A 10-Year Retrospective Analysis

Unnikrishnan Prathapadas,[1] Ajay P. Hrishi[1]
[1]*Division of Neuroanesthesia and Neurocritical Care, Sree Chitra Tirunal Institute of Medical Sciences and Technology, Trivandrum, Kerala, India*

Background: The vein of Galen aneurysmal malformation (VGAM) is a rare arteriovascular malformation in which a dilated median prosencephalic vein provides a low resistance conduit for intracerebral blood flow, resulting in high output cardiac failure, severe pulmonary hypertension, with or without CNS symptoms secondary to hydrocephalus, in the neonatal and pediatric population. Anesthetic management of these patients proves challenging due to the risk of periprocedural complications like congestive cardiac failure, pulmonary edema, and cerebral infarction. We report a retrospective analysis of the anesthetic management of this unique subset of patients with VGAM.

Materials and Methods: Case records of VGAM patients admitted between January 2005 and December 2015 were reviewed for the anesthetic technique and medications were administered. The incidence of intra and postprocedural complications and their management and outcomes were analyzed.

Results: Twenty-one patients underwent treatment for VGAM during this 11-year period. There were a total of 40 anesthetics inclusive of anesthesia administered for the embolization procedure, anesthesia for diagnostic MRI, and anesthesia for follow-up check digital subtraction angiographies (DSA). Intraprocedural adverse events occurred in 7 of the 40 anesthetics (17.5%).

Conclusions: VGAMs are a rare presentation with neurological deficits, difficult airways, and complex cardiorespiratory status. Due to the advances in monitoring of the cardiorespiratory system and newer anesthetic drugs, majority of these patients have uneventful and safe anesthetics. Caution and alertness can help to improve the identification and early treatment of intra- and postprocedural complications.

A0046 Use of Dexmedetomidine for Prophylactic Analgesia and Sedation in Patients with Delayed Extubation after Craniotomy: A Randomized Double-Blind Controlled Study

Gautam K. Goel,[1] Malti Agrawal,[1] Ananda P. Verma,[1] Rampal Singh,[1] Gopal Krishan[1]
[1]*Department of Anaesthesia, Rohilkhand Medical College, Bareilly, Uttar Pradesh*

Background: In this randomized double-blind controlled study, we evaluated the efficacy and safety of dexmedetomidine for analgesia and sedation in patients with delayed extubation after craniotomy.

Materials and Methods: Sixty patients with delayed extubation after craniotomy were randomized to the group "A" who received a continuous infusion of dexmedetomidine 0.5 μg/kg/h or the group "B" who received a continuous infusion of 0.9% sodium chloride. The mean percentage of time under optimal sedation (sedation agitation score 3–4), the percentage of patients who required rescue with propofol/fentanyl, as well as visual analog score, heart rate, mean arterial pressure, and peripheral oxygen saturation were recorded.

Results: The mean percentage of time under optimal sedation (sedation agitation score 3–4) was significantly higher in the dexmedetomidine group than in the control group (96.7% ± 7.3% versus 91.4% ± 9.8%, $p = 0.006$). The mean visual analog score was significantly lower in the dexmedetomidine group in comparison to the control group. Heart rate and mean blood pressure were insignificantly lower in the dexmedetomidine group than in the control group. No significant difference in peripheral oxygen saturation was observed between the two groups. For hemodynamic adverse events, patients in the dexmedetomidine group were more likely to develop bradycardia (6.3% versus 0%, $p = 0.047$) but had a lower likelihood of tachycardia (2.9% versus 18.7%, $p = 0.012$).

Conclusions: Dexmedetomidine is proved to be an effective prophylactic agent for sedation and analgesia in patients with delayed extubation after craniotomy. The use of dexmedetomidine (0.5 μg/kg/h) infusion does not produce respiratory depression but may increase the incidence of bradycardia.

(Compiled/edited by: Dr. Virendra Jain, Organising Secretary, ISNACC 2019, and Dr. Kiran Jangra, Assistant Professor, Anaesthesiology, PGIMER, Chandigarh.)