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CONTENTS

Review Article

Shaping the Future of Dental Anesthesiology : A Message to the Next Generation

Takehiko IIJIMA ····· 135

Clinical Report

Perioperative Management of a Patient with Alcoholic Cirrhosis Receiving Nalmefene : A Case Report

Natsumi NAOI, et al ····· 143

Special Article

Dental Anesthesia Management for Hereditary Arrhythmias : Brugada Syndrome, Early Repolarization Syndrome, and Long QT Syndrome

Kazumi TAKAISHI ····· 148

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Shaping the Future of Dental Anesthesiology：A Message to the Next Generation

Past President of Japanese Society of Dental Anesthesiology
Takehiko IIJIMA

Abstract

Dental anesthesiology in Japan has developed as a unique specialty shaped by historical, educational, and clinical needs. During the early development of anesthesia, pioneers in oral surgery emphasized its necessity in dental practice, leading to the recognition that dentists could provide anesthesia care. This historical background has conferred upon dental anesthesiologists both the right to administer anesthesia and the responsibility to meet patient needs. Although Japan has established a distinctive system for the education and certification of dental anesthesiologists, the provision of dental anesthesia remains insufficient compared with other countries. This disparity may reflect limited awareness of anesthesia needs among dental professionals, resulting in underdeveloped infrastructure and a shortage of trained specialists. The problem is particularly evident in the management of pediatric, disabled, and uncooperative patients, for whom general anesthesia and sedation are underutilized despite clear clinical indications. International comparisons show substantially higher utilization rates in North America, indicating unmet needs in Japan. Nevertheless, anesthesia provided by dental anesthesiologists in Japan is highly safe, with extremely low complication rates. To address these challenges, it is essential to enhance education, expand infrastructure, and promote interdisciplinary collaboration. Successful implementation in some hospitals demonstrates the potential for wider dissemination. In an aging society with increasingly complex medical conditions, continuous professional development is crucial to ensure safe and effective dental anesthesia care.

Keywords：DENTAL ANESTHESIA, GENERAL ANESTHESIA, PEDIATRIC DENTISTRY
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Perioperative Management of a Patient with Alcoholic Cirrhosis Receiving Nalmefene：A Case Report

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Abstract

Nalmefene, a medication used to reduce alcohol consumption in patients with alcohol dependence, acts on opioid receptors and may affect the analgesic efficacy of opioid medications. We report the perioperative management of a patient with alcoholic cirrhosis receiving nalmefene. The patient was a 61-year-old man scheduled to undergo partial glossectomy for tongue cancer. He had a history of pharyngeal and esophageal cancer treated with radiotherapy, alcoholic cirrhosis with hepatic encephalopathy, and esophageal varices. The severity of the cirrhosis was classified as Child-Pugh Class B, and the patient was being prescribed nalmefene for alcohol dependence. Given the patient's history of cervical radiotherapy for pharyngeal and esophageal cancer, which raised concerns regarding potential airway management difficulties, and considering the small tumor size and the relatively low invasiveness of the procedure, intravenous sedation was deemed an appropriate anesthetic approach. Because perioperative opioid administration might be required and nalmefene may attenuate opioid analgesia, nalmefene was discontinued one week before surgery. Sedation was performed using dexmedetomidine in combination with local infiltration of articaine. As a result, adequate sedation and analgesia were achieved without opioid administration. No respiratory depression, hemodynamic instability, or alcohol withdrawal symptoms were observed. The postoperative course was uneventful, and the patient was discharged without complications. For patients taking nalmefene, early identification of nalmefene use, appropriate preoperative discontinuation, and consideration of perioperative pain management and opioid requirements may contribute to safer perioperative management.

Keywords：NALMEFENE, ALCOHOLIC CIRRHOSIS, DEXMEDETOMIDINE, INTRAVENOUS SEDATION, ARTICAINE

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Dental Anesthesia Management for Hereditary Arrhythmias：Brugada Syndrome, Early Repolarization Syndrome, and Long QT Syndrome

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Abstract

This article discusses Brugada syndrome, early repolarization syndrome, and long QT syndrome from the perspective of preanesthetic evaluation and perioperative management.

Brugada syndrome and early repolarization syndrome：The patients should be referred to a cardiologist prior to surgery in the following cases：

・Coved-type waveform with J-point of 0.2 mV or higher in the right precordial leads (V1-V2).

・Saddleback-type waveform with amplitude of 0.2 mV or greater in the right precordial leads, or coved or saddleback-type with ST-segment elevation of less than 0.1 mV, J waves in two or more leads including inferior or lateral leads, or in widespread inferior-lateral leads, accompanied by a history of syncope suggestive of arrhythmia or a family history of sudden death in young individuals.

During anesthesia, it is recommended to pay attention to an increase in the height of J waves and to avoid conditions of parasympathetic dominance, elevated body temperature, electrolyte imbalances, myocardial ischemia, and the use of high-dose propofol.

Long QT syndrome：If the Schwartz score is ≥3.5 or if corrected QT (QTc) interval of ≥500 ms is observed on repeated 12-lead electrocardiograms, the patient should be referred to the Division of Cardiology prior to surgery. During anesthesia, QTc should be continuously monitored, and attention should be paid to further prolongation of QTc or changes in T-wave morphology. It is recommended to avoid the specific triggers for each type of congenital long QT syndrome, medications that cause secondary QT prolongation, and electrolyte abnormalities.

Keywords：HEREDITARY ARRHYTHMIA, BRUGADA SYNDROME, EARLY REPOLARIZATION SYNDROME, LONG QT SYNDROME, ANESTHESIA

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