Division of Dental Anesthesiology Department of Human Biology and Pathophysiology

Outline

Dental anesthesiology supports the safety and security of dental care. Our clinical duties include general anesthesia, conscious sedation, pain management, and emergency care for adverse complications and exacerbation of patients' systemic diseases caused by invasive procedures. In addition, a diverse group such as next-generation dental anesthesiologists, dentists from other fields, and dental hygienists have studied dental anesthesia in our department. Dentists studying dental anesthesia vary from those who want to become certified physicians, specialists, or certified hygienists, to those who want to study dental anesthesia in graduate school, and to those who want to focus on both research and clinical practice. The courses are designed to meet these demands. If you are at all interested, please feel free to come and inquire.

Members

Professor; Makoto TERUMITSU, D.D.S., Ph.D., Lecturer; Hiroyo YOSHIMOTO, D.D.S., Ph.D. Assistant professor; Hanako OHKE, D.D.S., Ph.D., Naomasa FUJITA, D.D.S., Ph.D.

Dental staff: Kaisei SAITOH, Hinako MABUCHI, Misato KOBASHI, Ryugen DOI.



Main research in progress

A Neuroscience Approach to Dental Anesthesiology



Viewing the microstructure, function, and pathology of the nerves in the oral-facial region through the dynamics of water molecules.



Resection of nerve lesions with neuropathic pain and in vivo regenerative medicine with an artificial nerve tube.



Chronic pain is an abnormal amplification of pain in the brain. Neurometabolite measurement in the human brain associated with central sensitization.



Functional connectivity changes in brain

regions in chronic pain.





Mechanism of gliotransmitter on signal transduction between glial cells.

Orofacial vasodilation and skin temperature due to parasympathetic nerve action.

Research for Safe and Secure Dental Anesthesia





Elucidation of problems caused by straying of the gastrointestinal tract.

Many other studies are underway.

Droplet spread by the extubation in general anesthesia.

Current publications

Kobashi M, Yoshimoto H, Ohke H, Goh K, Fujita N, Mizuno K, Saitoh K, Ando S, Saitoh M, *Terumitsu M. Multiple Abnormal Cutaneous Findings in a Patient with Hypomelanosis of Ito Undergoing General Anesthesia. Anesth Prog (accepted in March 2024, in press).

Otsuka A, *Terumitsu M, Matsuzawa H, Watanabe M, Seo K. Model-free cluster analysis for multi-b-value diffusion-weighted imaging of the inferior alveolar nerve. Journal of Oral and Maxillofacial Radiology 2023, 11(1):16-25.

*Terumitsu M, Takado Y, Fukuda K, Kato E, Tanaka S. Neurometabolite Levels and Relevance to Central

Sensitization in Chronic Orofacial Pain Patients: A Magnetic Resonance Spectroscopy Study. Journal of Pain Research 2022:15 1421–1432.

*Iwamoto R, Yoshimoto H, Ohke H, Kobashi M, Goh K, Terumitsu M. General Anesthesia in a Patient with Poland Syndrome with additional of Complication, Movement Disorder of the Tongue and Other Morbidities. J Clin Anesth (Jpn) 2021; 45: 557-61.

Okada Y, Ohke H, Yoshimoto H, Kobashi M, Saitoh M, *Terumitsu M. Nasogastric Tube Knotted Around a Nasal Endotracheal Tube in the Nasopharynx: Possible Cause. Anesth Prog. 2021;1;68(2):90-93.

Ohke H, Sato T, Mito K, TerumitsuM, *Ishii H. Effect of the parasympathetic vasodilation on temperature regulation via trigeminal afferents in the orofacial area. J Physiol Sci (2020) 70:22.