Division of Dental Anesthesiology
Department of Human Biology and Pathophysiology

Outline
Dentist anesthesiologists offer a full spectrum of safe and comfortable anesthesia services for dental care. It is a unique feature of Japanese government policy that specialized dentists are allowed to perform general anesthesia on whomever requires oral surgery or dental treatment. In our hospital, a large variety of oral surgeries are performed, ranging from a major surgery of orofacial cancer accompanied with a reconstructive operation to minor surgeries. In addition, dental treatments of children and handicapped patients under general anesthesia are frequently performed at our hospital.

Sedation is also utilized for treatments of patients with anxiety or some circulatory diseases. Nitrous oxide inhalation and administration of benzodiazepine or intravenous anesthetic agents are used. Sedation not only provides a sedative effect for consciousness but also secures a stable circulation dynamic in patients. The aging of Hokkaido's population is advancing, therefore, the role of sedation is becoming increasingly important. Moreover, no patient should be denied access to quality dental care for lack of adequate control of anxiety and pain.

Pain control encompasses a considerable part of dentist anesthesiologists’ duties. We educate students in the safe and effective administration of local anesthesia, using an intelligent local anesthetic injection simulator. Orofacial pain or abnormal sensation are sometimes difficult to diagnose and care. In our pain clinic, we apply Quantitative Sensory Testing (QST), questionnaires and Magnetic Resonance Neurography (MRN) to evaluate the disordered trigeminal nerve, and decide a course of treatment based on our advanced diagnosis.

Faculty members
Professor; Makoto TERUMITSU, D.D.S., Ph.D.
Lecturer; Hiroyo YOSHIMOTO, D.D.S., Ph.D.
Assistant professor; Rie IWAMOTO, D.D.S., Ph.D.
Assistant professor; Hanako OHKE, D.D.S.

Postgraduate student
Kenji GO, D.D.S.

Main research in progress
1) Magnetic Resonance Neurography (MRN) for patients with a disordered trigeminal nerve.
2) Macrophage imaging in vivo in the animal model of neuropathic pain to elucidate the mechanism of neuro-inflammation after nerve injury.
3) Multi-institutional joint research for treating orofacial pain in Japan.
4) Elucidating central nervous system sensitization in chronic pain.
6) Novel and safe anesthesia regimens for handicapped patients and children.
**Current publications**


Makoto TERUMITSU, D.D.S., Ph.D.

Hiroyo YOSHIMOTO, D.D.S., Ph.D.

Kaoru KANAZAWA, D.D.S., Ph.D.

Hanako OHKE, D.D.S.

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