

Sports Medicine/Dentistry

1. Staffs and Students (April, 2009)

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|---------------------|----------------------|----------------|
| Associate Professor | Toshiaki UENO | |
| Assistant Professor | Toshiyuki TAKAHASHI, | Hiroshi CHUREI |
| Hospital Staff | Sachiko FUJINO | |
| Graduate Student | Tomofumi TAKAHATA, | Keisuke ABE, |
| | Sharika Shahrin | |
| Research Student | Kayoko YOKOTA, | Naoko OTABE |

2. Purpose of Education

Sport medicine/dentistry is a branch of medical and dental sciences which deals with the clinical management of oral health of athletes and sports-active people and the safety measures of sports-related traumatic injuries and disorders. Main objective of sports medicine/dentistry in graduate course is to provide the students to study the oral health conditions in athletes and sports-active people, the changes of oral environment associated with physical and sporting activities, the possible correlations between occlusion and general motor functions and body posture, the novel techniques of sports mouthguard and faceguard, the relations between mastication and occlusion and brain functions, and so on. Students are also taught to advanced knowledge on sports medicine/dentistry and up-to-date techniques to fabricate custom mouthguard and faceguard.

3. Research Subjects

- 1) Oral health promotion of athletes and sports-active people
 - (1) Field survey of oral health conditions in athletes and sports-active people
 - (2) Changes of oral environment associated with physical and sporting activities
 - (3) Influences of sports drinks and supplements on oral health
- 2) Safety measures of sports-related dental and maxillofacial traumatic injuries
 - (1) Diagnosis and treatment techniques for sports-related dental and maxillofacial injuries
 - (2) Development and innovation of sports mouthguard
 - (3) Development and innovation of sports faceguard
- 3) Correlations between occlusion and general motor functions
 - (1) Biomechanical assessment of motor performance associated with occlusion
 - (2) Electrophysiological analysis of neuromuscular function associated with occlusion
- 4) Correlations between occlusion and body posture
- 5) Relations between mastication and occlusion and brain functions

4. Clinical services

Sports dentistry clinic in Dental Hospital of Tokyo Medical and Dental University offers comprehensive care and clinical management for athletes and sports-active people suffered dental diseases and traumatic injuries. Custom-fitted protective gears such as mouthguard and faceguard against sports-related dental and maxillofacial trauma are also handled for participants in contact sports such as a boxing, American football, rugby football, hockey, lacrosse, and martial art.

5. Publications

Original Articles

- 1) Ihara C, Takahashi H, Matsui R, Yamanaka T, Ueno T : Bonding durability of custom-made mouthpiece for scuba diving after water storage under pressure. *Dent Materials J* 28 : 487-492, 2009.
- 2) Nakano S, Yamanaka T, Takahashi T, Toyoshima Y, Kawahara T, Ueno T : *Int J Sports Dent* 2 : 25-32, 2009.

6. Presentations

- 1) Fujino S, Takahashi T, Ueno T : Influence of mouthguard clenching on stabilization of postural stance. 6th Biennial Congress of AAP, Seoul, Korea, April 24-26, 2009.
- 2) Ueno T, Churei H, Abe K, Yokota K : Clinical effectiveness of custom faceguard for recovery from maxillofacial injury. 6th Biennial Congress of AAP, Seoul, Korea, April 24-26, 2009.
- 3) Takahashi T, Fujii R, Ueno T, Yokoyama A : Comparison of cerebral activation involved in grinding-like jaw

movement and clenching of teeth. 6th Biennial Congress of AAP, Seoul, Korea, April 24-26, 2009.

- 4) Fujii R, Takahashi T, Toyomura A, Miyamoto T, Ueno, T, Yokoyama A : Activation of human cerebral cortex during oral stereognosis: a functional magnetic-resonance imaging study. 6th Biennial Congress of AAP, Seoul, Korea, April 24-26, 2009.
- 5) Churei H, Oishi A, Tateishi T, Fujino S, Abe K, Yokota K, Takagi Y, Ueno T : Clinical managements to safe and early return to pitch for a soccer player suffered orofacial trauma. 2009 Annual Symposium of Academy for Sports Dentistry, Chicago, USA, May 7-9, 2009.

7. Grants and Fellowships

- 1) JSPS Grant-in-Aid for Scientific Research (Japan Society for the Promotion of Science, 2009). Ueno T, Takahashi T.

8. Awards and Honors

- 1) JASD Award (Japanese Academy of Sports Dentistry, 2009). Churei H, Yokota K, Takahashi H, Ueno T.