

Removable Partial Denture Prosthodontics

1. Staffs and Students (April, 2010)

Professor	Yoshimasa IGARASHI	
Associate Professor	Noriyuki WAKABAYASHI	
Junior Associate Professor	Masayuki HIDESHIMA,	Kenji FUEKI
Assistant Professor	Masayuki SATO, Ichirou MINAMI, Jyurou WADACHI, Eiko YOSHIDA	Takeshi UENO, Teruyasu NAKAMURA, Shusuke INUKAI,
Hospital Staff	Tomohiro ANDO, Takeyoshi SUGIURA, Kensuke KAGAYA	Masahiro ONA, Mika INUKAI,
Secretary	Haruka MATSUURA	
Graduate Student	Kouta OKANO, Kazuki ISHIHATA, Jyunnichirou WADA, Aiichirou AO, Kengo FUJIKI, Kazuhito SHOI, Natsuko MURAKAMI, Ryo HAYASHI,	Yuka ABE, Yoshiyuki SAKAI, Kousuke UMEHARA, Yuuki IWAKI, Keita YODA, Atsushi TAKAICHI, Yusuke TOYOSHIMA, Takashi SEKINISHI

2. Purpose of Education

Removable partial denture prosthodontics is a branch of Oral Health Science that deals with replacement of missing teeth and oral tissues to restore and maintain oral form, function, appearance, and health. Main objective of removable partial denture prosthodontics is to provide students in the graduate course opportunity to master standard method of diagnosis, technical skill, applied skill in lectures and practical works. Students are also taught on how to adapt removable prosthesis in the mouth with missing teeth from a biological and engineering standpoints.

3. Research Subjects

- 1) Comparisons between a mixing ability test and masticatory performance tests using a brittle or an elastic test food.
- 2) Assessment of the Pronunciation in Subjects with Sound Dentition.
- 3) Follow-up study and risk assessments for periodontitis of abutment teeth in patients with removable partial dentures.
- 4) Assessment of psychological stress during dental treatments.
- 5) Application of polyester copolymer to denture material.
- 6) Application of cobalt chrome alloy to telescopic denture material.
- 7) Three-dimensional analysis of occlusal curvature.
- 8) Fabrication of precision metal frameworks with cast-on method.

4. Clinical Services

Patients with missing teeth have increased according to the aging of the population, so improving their quality of life has been required. Dental prosthetic clinic provides removable partial dentures to patients with missing teeth as one of the best treatment options. The dentures are individually designed from the view points such as mobility of denture, oral sense, pronunciation and aesthetic points of view.

5. Publications

Original Article

1. Otomaru T, Aimaijiang Y, Sumita Y, Takahashi T, Ueno T, Fueki K, Igarashi Y, Taniguchi H. Evaluation of stomagnathic function after prosthodontic treatment in a mandibulectomy patient. *Maxillofacial Prosthetics*. 33(1) 23-29, 2010.
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3. Wakabayashi N, Kondo T, Yahagi R, Suzuki T. A patient-based model study of fixed splinting of premolar teeth with reduced periodontal support. *Int J Comput Dent.* 13(4):317-330, 2010.
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5. Ona M, Takahashi H, Sato M, Igarashi Y, Wakabayashi N. Effect of reactive adhesives on the tensile bond strength of vinyl polysiloxane impression materials to methylmethacrylate tray material. *Dent Mater J.* 29(3):336-340, 2010.
6. Hudeab M, Wakabayashi N, Suzuki T, Kasugai S. Morphological classification and stress analysis of the mandibular bone at premolar region for implant placements. *Int J Oral Maxillofac Implants.* 25(3):482-490, 2010.
7. Ohida M, Yoda K, Nomura N, Hanawa T, Igarashi Y. Evaluation of the static frictional coefficients of Co-Cr and gold alloys for cone crown telescope denture retainer applications. *Dent Mater J.* 26;29(6):706-12, 2010.
8. Asai T, Kazama R, Fukushima M, Okiji T. Effect of overglazed and polished surface finishes on the compressive fracture strength of machinable ceramic materials. *Dent Mater J.* 29: 661-667, 2010.
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11. Fueki K, Igarashi Y, Maeda Y, Baba K, Koyano K, Akagawa Y, Sasaki K, Kuboki T, Kasugai S, Garrett NR. Factors related to prosthetic restoration in patients with shortened dental arches: a multicentre study. *J Oral Rehabil.* (2010 Nov 20. Epub ahead of print).
12. Ueno T, Yamada M, Suzuki T, Minamikawa H, Sato N, Hori N, Takeuchi K, Hattori M, and Ogawa T, Enhancement of bone-titanium integration profile with UV-photofunctionalized titanium in a gap healing model. *Biomaterials,* 31(7): 1546-1557, 2010.
13. Ueno T, Hori N, Iwasa F, Takeuchi K, Tsukimura N, Yamada M, Hattori M, Yamamoto A, Ogawa T, Selective cell affinity of biomimetic micro-nano-hybrid structured TiO₂ overcomes the biological dilemma of osteoblasts. *Dental Materials,* 26(4): 275-287, 2010.
14. Ueno T, Hori N, Yamada M, Att W, Suzuki T, Okada S, Ohno A, Aita H, Kimoto K, Ogawa T. Ultraviolet light treatment for the restoration of age-related degradation of titanium bioactivity. *International Journal of Maxillofacial Implants,* 25(1): 49-62, 2010.
15. Ueno T, Yamada M, Hori N, Suzuki T, Ogawa T. Effect of ultraviolet-photoactivation of titanium on osseointegration in a rat model. *International Journal of Maxillofacial Implants,* 25(2): 287-294, 2010.
16. Iwasa F, Hori N, Ueno T, Minamikawa H, Yamada M, Ogawa T, Enhancement of osteoblast adhesion to UV photofunctionalized titanium via an electrostatic mechanism. *Biomaterials,* 31(10): 2717-2727, 2010.
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20. Yamada M, Kubo K, Ueno T, Iwasa F, Att W, Hori N, Ogawa T, Alleviation of commercial collagen sponge- and membrane-induced apoptosis and dysfunction in cultured osteoblasts by an amino acid derivative. *International Journal of Maxillofacial Implants.* 25(5); 939-46, 2010.