

ANNUAL PUBLICATIONS**Department of Maxillofacial Biology Maxillofacial Anatomy**

1993.1.-2000.3.

I. Staffs and Students (April, 1999)

Professor	Yasuo Yamashita
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Graduate Student	Akiko Nozawa
Special Student	Tsuyoshi Daigo
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II. Educational Outline of Graduate Course

This course is educated aiming to teach the feature of a positional relation of the organs which composes the maxillofacial region each other and those macroscopic structures, and to understand the function of the structure which composes them from the viewpoint of morphology.

III. Research Subjects

To examine the structure of teeth, periodontal tissues and soft tissues in the maxillofacial region to investigate the support mechanisms of teeth and system of mastication from a viewpoint of morphology, the following themes are researched.

- 1) Mechanism of epithelial attachment of junctional epithelium in human gingiva.
- 2) Macroscopic and histological observation of *Corpus adiposum buccae*.
- 3) Transmission electron microscope observations on structural changes of teeth by leather irradiation.
- 4) Latin adjectives that mean international anatomical names consisting of plural words, and classification of the corresponding words in Japanese anatomical names.
- 5) Comparative histology and embryology of teeth.
- 6) Histogenesis of periodontal tissue.
- 7) Structural features of mandibular condylar cartilage.
- 8) Research of function of dental lamina in tooth development.
- 9) Research of functional skeletal morphology of maxillofacial region.

IV. Publications (January, 1993-March, 2000)**A. Original Articles**

- 1) ○An, S.: Observations on gingival fibers of upper premolar region — Structures and functions of dentogingival fibers —. J. Stomatol. Soc., Jpn., 61(2): 353-374, 1994 (in Japanese).
- 2) ○Baba, O.: Production of monoclonal antibody that recognizes glycogen and its application for immunohistochemistry. J. Stomatol. Soc., Jpn., 60(2): 264-287, 1993 (in Japanese).
- 3) ○Fabian, F. M.: Immunohistochemical observation of enamel protein localization in secretory ameloblast by application of Brefeldin A in organ culture system of mouse molar tooth germs. Jpn.J.Oral Biol., 38(2): 213-225, 1996.
- 4) Fukada, K., Shibata, S., Suzuki, S., Ohya, K. and Kuroda, T.: In situ hybridization study of type I, II, X collagens and aggrecan mRNAs in the developing condylar cartilage of fetal mouse mandible. J. Anat., 195: 321-329, 1999.
- 5) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 3.Observation on ultrastructure of human dentin crystals. Bull. Tokyo Med. Dent. Univ., 40(1): 29-44, 1993.
- 6) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 4.Observation on ultrastructure of human bone crystals. Bull. Tokyo Med. Dent. Univ., 40(2): 93-112, 1993.
- 7) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 5.Three-dimensional observation on ultrastructure of human enamel crystals. Bull. Tokyo Med. Dent. Univ., 40(3): 135-146,

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- 8) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 6.Observation on lattice imperfection of human tooth and bone crystals I. Bull. Tokyo Med. Dent. Univ., 40(3): 147-165, 1993.
- 9) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 7.Observation on lattice imperfection of human tooth and bone crystals II. Bull. Tokyo Med. Dent. Univ., 40(4): 193-205, 1993.
- 10) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 8.Observation on fusion of human enamel crystals. Bull. Tokyo Med. Dent. Univ., 40(4): 207-216, 1993.
- 11) Ichijo, T., Yamashita, Y. and Terashima, T.: Observations on structural features and characteristics of biological apatite crystals 9.Observation on dissolution of cariousenamel crystals. Bull. Tokyo Med. Dent. Univ., 41(1): 1-13, 1994.
- 12) Kasugai, S., Shibata, S., Suzuki, S., Susami, T. and Ogura, H.: Characterization of a system of mineralized-tissue formation by rat dental pulp cells in culture. Arch. Oral Biol., 38(9): 769-777, 1993.
- 13) Kitasako, Y., Shibata, S., Pereira, PNR and Tagami, J.: Short-term dentin bridging of mechanically-exposed pulps capped with adhesive resin systems. Operative Dentistry, 25: 155-162, 2000.
- 14) Kitasako, Y., Shibata, S., Arakawa, M., Cox, C. F. and Tagami, J.: A light and transmission microscopic study of mechanically exposed monkey pulps dynamics of fiber elements during early dentin bridge formation. Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics, 89(2): 224-230, 2000.
- 15) O Kuo, P.: Histological study of occlusal bearing capability of apatite implant in maxilla. J. Stomatol. Soc., Jpn., 61(2): 221-236, 1994 (in Japanese).
- 16) O Li, Y.: Observations of the structure of incremental lines in acellular cementum. J. Stomatol. Soc., Jpn., 63(3): 489-515, 1996 (in Japanese).
- 17) Ogiso, M., Tabata, T., Nakabayashi, N. and Yamashita, Y.: Tissue response of apatite-filled resin cement and titanium-reinforced apatite dental implants in dogs. Journal of Long-Term Effects of Medical Implants, 3(1): 69-79, 1993.
- 18) Ogiso, M., Yamashita, Y., Tabata, T., Ramonito, R. and Borgese, D.A. : The delay method; A new surgical technique for enhancing the bone-binding capability of HAP implants to bone surrounding implant cavity preparations. J. Biomed. Mater. Res., 28: 805-812, 1994.
- 19) Ogiso, M., Yamashita, Y. and Matsumoto, T.: Microstructural changes in bone of HA-coated implants. J. Biomed. Mater. Res., 39: 23-31, 1998.
- 20) Ogiso, M., Yamashita, Y. and Matsumoto, T.: Differences in microstructural characteristics of dense HA and HA coating. J. Biomed. Mater. Res., 41: 296-303, 1998.
- 21) Ogiso, M., Yamashita, Y. and Matsumoto, T.: The process of physical weakening and dissolution of the HA-coated implant in bone and soft tissue. J. Dent. Res., 77(6): 1426-1434, 1998.
- 22) O Ohsako, M.: Histological studies on growth and function of condylar process in rat mandible. J. Stomatol. Soc., Jpn., 60(4): 475-524, 1993 (in Japanese).
- 23) O Sakamoto, I.: Observations on structure of bone in human mandibular condyles with osteophyte formation. J. Stomatol. Soc., Jpn., 64(2): 243-276, 1997 (in Japanese).
- 24) Shibata, S., Baba, O., Sakamoto, Y., Ohsako, M., Yamashita, Y. and Ichijo, T.: An ultrastructural study of the mitotic preosteoblasts in the primary spongiosa of the rat mandibular condyle. Bone, 14: 35-40, 1993.
- 25) Shibata, S., Baba, O., Niikura, M., Suzuki, S., Yamashita, Y. and Ichijo, T.: An ultrastructural study of mitotic chondrocytes in the proliferative zone of the rat tibial growth plate. Ann. Anat., 175: 41-45, 1993.
- 26) Shibata, S., Niikura, M., Suzuki, S., Terashima, T., Yamashita, Y. and Ichijo, T.: An ultrastructural study of mitotic chondrocytes in the Swarm rat chondrosarcoma. Bull. Tokyo Med. Dent. Univ., 40(1): 1-11, 1993.
- 27) Shibata, S., Suzuki, S., Yamashita, Y. and Ichijo, T.: A comparative ultrastructural study of the mitotic chondrogenic cells in the mandibular condyle and tibial growth plate of the rat. Arch. Oral Biol., 38(10): 845-851, 1993.
- 28) Shibata, S., Suzuki, S., Tengan, T. and Yamashita, Y.: A histochemical study of apoptosis in the reduced ameloblasts of erupting mouse molars. Arch. Oral Biol., 40(7): 677-680, 1995.
- 29) Shibata, S., Suzuki, S., Tengan, T., Ishii M. and Kuroda, T.: A histological study of the developing condylar cartilage of the fetal mouse mandible using coronal sections. Arch. Oral Biol., 41(1): 47-54, 1996.
- 30) Shibata, S., Suzuki, S. and Yamashita, Y.: An ultrastructural study of cartilage resorption at the site of initial endochondral bone formation in the fetal mouse mandibular condyle. J. Anat., 191:65-76, 1997.
- 31) Shibata, S. and Yamashita, Y.: Observations of cartilage resorption at the site of initial endochondral bone formation in the fetal mouse mandibular condyle. J. Stomatol. Soc., Jpn., 64(4): 560, 1997 (in Japanese).
- 32) Shibata, S., Fukada, K., Suzuki, S. and Yamashita, Y.: Immunohistochemistry of collagen types II and X, and enzyme-

- histochemistry of alkaline phosphatase in the developing condylar cartilage of the fetal mouse mandible. *J. Anat.*, 191: 561-570, 1997.
- 33) Shibata, S., Kaneko, S., Yanagishita, M. and Yamashita, Y.: Histochemical localization of hyaluronan and versican in the rat molar dental pulp. *Arch. Oral Biol.*, 44: 373-376, 1999.
 - 34) Shikano, S. and Yamashita, Y.: Histological observations on the part of the mandible where mylohyoid muscle originates. *J. Stomatol. Soc., Jpn.*, 60(3): 420, 1993 (in Japanese).
 - 35) ○Shikano, S.: Histological observations on structure of bundle bone in area of mylohyoid line. *J. Stomatol. Soc., Jpn.*, 63(4): 550-575, 1996 (in Japanese).
 - 36) Shikano, S.: The official nomenclature of the articular facets for the rib on the thoracic vertebra: a case for revision. *Folia Morphologica (Warsz.)*, 56(2): 123-124, 1997.
 - 37) Shikano, S. and Yamashita, Y.: Anatomical names of *Foramina* and *Canales* in skeleton. *J. Stomatol. Soc., Jpn.*, 65(1): 6-13, 1998 (in Japanese).
 - 38) Shikano, S. and Yamashita, Y.: Adjectives that have different meanings in various Latin anatomical names, and expression of these adjectives in Japanese anatomical names. *J. Med. Dent. Sci.*, 45(2): 97-102, 1998.
 - 39) Shikano, S. and Yamashita, Y.: Anatomical names of *Fossae* and *Foveae* in skeleton. *J. Stomatol. Soc., Jpn.*, 66(3): 262-269, 1999 (in Japanese).
 - 40) Shinada, K., Ozaki, F., Cordeiro, J. G. O., Okada, S., Shimoyama, K., Nagao, M., Ichinose, S. and Yamashita, Y.: A morphological study of interactions of *Candida albicans* and *Streptococcus mutans*. *J. Stomatol. Soc., Jpn.*, 62(2): 281-286, 1995 (in Japanese).
 - 41) Suda, N., Shibata, S., Yamazaki, K., Kuroda, T., Senior, P. V., Beck, F. and Hammond, V. : Parathyroid hormone-related protein regulates proliferation of condylar hypertrophic chondrocytes. *Journal of Bone and Mineral Research*, 14(11): 1838-1847, 1999.
 - 42) Tanaka, J., Hoshino, K., Torii, S., Shioji, S., Aiura, S. and Kozawa, Y.: Application of magnetic attachments for implants — Part 2. The use of magnetic attachments of a cap shape (MACS) to removable crown-bridge and impression making procedure —. *J. Jpn Soc. Oral Implant.*, 12(4): 555-562, 2000 (in Japanese).
 - 43) ○Tong, P.: Observations on the structure of secondary dentin in the molar. *Japanese Journal of Conservative Dentistry*, 37(1): 336-368, 1994 (in Japanese).
 - 44) Torii, S., Shibata, S., Shikano, S., Nozawa, A., and Yamashita, Y.: Tooth development of *Caiman crocodilus*. *J. Stomatol. Soc., Jpn.*, 67 (1): 93, 2000 (in Japanese).
 - 45) ○Yamamura, M.: Structural changes in jaw bone marrow after hemorrhagic infiltration. *J. Stomatol. Soc., Jpn.*, 61(2): 207-220, 1994 (in Japanese).
 - 46) Yamashita, Y.: Symposium II, For the point of contact of scientific general education and the dental education. *The Journal of Japanese Association for Dental Education*, 11(1): 60-61, 1995 (in Japanese).
 - 47) Yamashita, Y.: The anatomy of the mandible for the dental implant. *The Journal of the Japan Dental Association*, 52(6): 758, 1999 (in Japanese).
 - 48) ○Zhong B.: Histological observation on gingival fibers of upper molar region. *J. Stomatol. Soc., Jpn.*, 61(2): 329-352, 1994 (in Japanese).
 - 49) Zhong, B. and Yamashita, Y.: Structures and function on gingival fibers of upper molar region — Observations on circular fibers and dentogingival fibers. *Stomatology*, 17(1): 1-3, 1997 (in Chinese).
 - 50) ○Zhong, W.: Transmission electron microscopic observations of dentin structures stained with silver. *J. Stomatol. Soc., Jpn.*, 66(2): 189-222, 1999 (in Japanese).

B. Books

- 1) Ishikawa, I., Yoshida, N. and Yamashita, Y.: Fight in pocket with phagocyte — About the neutrophils collagenase. *Dental Outlook*, 82(3): 680-683, 1993 (in Japanese).
- 2) Kino, K. and Yamashita, Y.: Anatomy for extraction. *The Nippon Dental Review*, supplement: 9-16, 1997 (in Japanese).
- 3) Kozawa, Y., Torii, S., Mishima, H., Iwasa, Y., Suzuki, K., Sasagawa, I. and Ferguson M. W. J. : The origin of dancing and grouping of ameloblasts to form enamel prisms and Hunter-Schreger bands in reptiles and primitive mammalia. *Proceedings of the 11th International Symposium on Dental Morphology*, pp.273-280, 1999.
- 4) Shikano, S.: Dictionary of Osteology for Learning Fundamental Latin Grammar. Ishiyaku Publishers, Inc., xviii+346p, Tokyo, 1995 (in Japanese).
- 5) Yamashita, Y. and Ichijo, T.: Anatomy of root surface of teeth. *The Nippon Dental Review*, No.608 (June): 70-85, 1993. (in Japanese)

- 6) Yamashita, Y.: I. Teeth and periodontal tissues, III-15 Muscle and fascia in lateral neck region (for neck dissection), III-16 Artery, vein, and lymphatic vessel in lateral neck region (for neck dissection), (Maxillofacial and Oral Surgery). Textbook of Maxillofacial and Oral Surgery, Sasaki, M. (ed.), Oral Health Association of Japan, Tokyo, pp.94-95, pp.133-135, pp.136-138, 1995 (in Japanese).
- 7) Yamashita, Y.: Structure and formation of CEJ and the tissue of neighborhood. The Nippon Dental Review, supplement: 9-20, 1995 (in Japanese).
- 8) Yamashita, Y.: Colonal cement. The Nippon Dental Review, No.643 (MAY): 5-7, 1996 (in Japanese).
- 9) Yamashita, Y.: Anatomy and histology of periodontal tissue. Periodontology, Ishikawa, I., (ed.), Nagasue Publishers, Inc., Tokyo, pp.3-9, 1996 (in Japanese).
- 10) Yamashita, Y., Shibata, S., Shikano, S., Yoda, T., Sakamoto, I., Imai, H. and Enomoto, S.: Morphological studies on the structure of the original mandibular bone and new bone after regional resection. The First Symposium on Tissue Engineering for Hard Tissues, 1: 25-32, 1997 (in Japanese).
- 11) Yamashita, Y., Shikano, S., Shibata, S., Torii, S., Yoda, T., Sakamoto, I., Imai, H. and Enomoto, S.: Observations on the structural changes of the alveolar bone after regional resection. The Second Symposium on Tissue Engineering for Hard Tissues, 2: 74-77, 1998 (in Japanese).

C. Review Articles