Application of TADs to Tip-Edge treatment and corticotomy for the best results

For achieving the precise results, diagnosis is, of course, the most important issue. In addition, treatment strategy is also critical to get the best finishing. TADs (Anchor screw) are now a daily use tool as an orthodontic anchorage. However, the orthodontic force that one TAD can hold is some point between 300 gf and 500 gf, that can not make en masse movement of the entire arch when using with Edgewise brackets, because Edgewise brackets need bodily movement. Whereas, Tip edge brackets allow tipping with a lot lighter force for translating, so that the entire dental arch can be distalized at the same time.

Corticotomy, on the other hand, has been popular and found out to get not only fast but also precise occlusion. There are several levels of corticotomy depending on how much tissue would be involved. The Kole method is the most invasive corticotomy, whereas corticision is the lightest and handy to apply in our daily practice.

During this lecture, audiences will learn how to make diagnosis with the use of TADs as an orthodontic anchorage and how to use them. Also, different levels of corticotomy may be clarified and which we should apply. With use of TADs and/or corticotomy, we can make differential tooth, arch movement easy.

Summary:
Absolute anchorage devises consists of the followings; DENTAL IMPLANT, BONE PLATE (SAS), ONPLANT and MINISCREW IMPLANT. Within these devices, reliable and less invasive tool is MINIIMPLANT, which is also called TAD (Temporary Anchorage Device).TAD can be placed as an orthodontic anchorage to stabilize as well as distal or mesial movement of the anchored tooth or teeth. For those purposes, TAD can be placed on buccal or lingual, anterior or posterior areas. One thing we need to consider when placing TAD is to prevent root touch. Therefore, if we approach from buccal side, the infrazygomatic arch in the maxilla and the anterior external oblique ridge in the mandible are the safe recipient sites. The palatal slope is easy and less risky site because distance between roots is large.

With the use of TADs, various malocclusions including Class II, III, openbite and deep bite have been treated in a short period of time and precisely.

Moreover, esthetic orthodontic treatment such as lingual bracket system and lingual non-bracket system became possible to make good torque control with TADs. The clear plastic appliance can also be applied with TAD and get good results. DJ retractor which was currently developed needs TADs in both right and left palatal slopes and sometimes one more TAD in the middle. This approach is totally esthetic and 3 to 3 en masse retraction can be achieved without anchorage loss. I have developed TAD, clear plastic appliance and DJ retractor one by one in the last 20 years and applied in my practice and reported in many journals and conventions.

Regarding speedy orthodontics, corticotomy is necessary. There are several levels of corticotomy. Kole reported segmental osteotomy in 1959, and currently, Wilcko brothers added grafting material in addition to corticotomy for expanding tooth moving width. Less invasive technique has been invented which is called “Cortisision”. This technique does not need muco-gingival flap, but just insert a scalp directly from over the gingival and drive into the alveolar cortices in 3 mm. This simple surgery increases tissue turnover six times fast and make rapid tooth movement. With corticotomy, local bone is demineralized and root will have less resistance in movement so that less root resorption occurs.

These topics are very effective. As general practitioners, these simple surgical techniques are easily added in their daily practice for getting precise touch down.

CURRICULUM VITAE

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EDUCATION:

PhD: Aichi-Gakuin University, School of Dentistry, 1991

Postdoctoral: Saint Louis University Medical Center, Master of Science, Orthodontics, 1988

Aichi-Gakuin University, School of Dentistry, Certificate of Orthodontics, 1980

Graduate: Aichi-Gakuin University, School of Dentistry, DDS, 1978

American Board of Orthodontics, 2003

Academic Appointments:

2008	Visiting professor in the Shigakkan University
2007	Visiting professor in the Harvard University School of Dental Medicin
2002	Visiting professor in the MahaSaraswati University in Indonesia
2001	Visiting professor in the Thamassat University in Thailand
2000	Director, Toyo college
2000	Clinical professor in the Department of Graduate Orthodontics of St. Louis University
1998	Director, Society of Stomatognathic Function
1999	Executive visiting professor of Guilin Medical college in China
1999	President, chair and professor of International Orthodontic Research Institute
1998	Adjunct professor in the Department of Graduate Orthodontics of St.Louis University
1998	Director, Society of Stomatognathic Function
1998	Professor at the Tokai dental collage
1994-99	Associate professor and vice head, Department of Orthodontics at Aichi-Gakuin University
1994-99	Researcher of Aichi-Gakuin Research Institute of Advanced Oral Science
1995-98	President of Japan Tip-Edge orthodontic Society
1991-94	Assistant professor of Aichi-Gakuin University
1980-86	Instructor of Department of Orthodontics, Aichi-Gakuin University

PROFESSIONAL SOCIETIES:

Member, Japan Tip Edge Society of Orthodontics

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Member, American Association of Orthodontists

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Member, International Association of Dentistry for Children

Member, Japan Orthodontic Society

Member, Aichi-Gakuin Dental Society

Member, Japan Cleft Palate Society

Member, Society of Japan Oral Science

Member, Japanese Society of Oral Biology

Member, Japanese Society of Laser Dentistry

Member, The Japanese Society for Jaw Deformities
Member, Japanese Society of Stomatognathic Function
Member, Japanese Society for Bone and Mineral Research
Member, Japanese Academy of Occlusion and Health
Member, Kinki-Tokai Orthodontic Society

GRANTS:

1. Development of index to estimate craniofacial growth using thumbrex X-ray picture (No.B-2-07457515, Ministry of Education, Japan), 1986.
2. Timing and factors of condyle backward displacement that causes juvenile temporomandibular dysfunction (No.C-04671277, Ministry of Education, Japan), 1992
3. A study of born turnover in effective tooth movement (Furukawa found), 1992
4. Development of genetic facial deformed Beagle model (B-06557115, Ministry of Education, Japan, 1994
5. Effect of abnormal occlusion on sport athletics (B-05671730, Ministry of Education, Japan, 1995
6. Application of Implant in orthodontic treatment (Sankin found), 1996

PUBLICATIONS:

84 Original articles
29 CLINICAL ARTICLES:
28 PUBLISHED BOOKS
74 OTHER PUBLISHED ARTICLES
7 REVIEWS
29 MAJOR INVITED LECTURES AT THE INTERNATIONAL MEETINGS

6 GRADUATE THESIS COMMITTEES at St. Louis University