The 9th Conference of the Asian International Association of Dental Traumatology

March 7 – 8, 2020
City Sports Center Cebu / SEDA
Cebu City, Philippines
Message from the President

It is a great pleasure for me to hold the 9th Conference of the Asian International Association of Dental Traumatology (AADT) under the auspices of Prof. Rodivick Docor, Dean of the College of Dentistry, SWU PHINMA. This is the first event in the Philippines. There are three societies on dental traumatology: The International Association of Dental Traumatology (IADT) recognized in the world, the Japan Association of Dental Traumatology (JADT) recognized in Japan, and the Asian International Association of Dental Traumatology (AADT) recognized in Asia. They perform clinical evaluation based on basic sciences from education, research and a clinical viewpoint. As a specialized field in each university and a dental service organization, they play a key role and continue to develop towards the medical forefront.

This time, I hold the society meeting by the sponsorship of the College of Dentistry, SWU PHINMA in the splendid country of the Philippines. I extend my special thanks to the President, Dr. Chito Salazar, and Dr. Omar Rodis (Tokushima University Dental School, Japan).

From the situation of stomatology, it is very important for healthy life expectancy to prevent a tooth from occlusal trauma, in particular, traumatic occlusion based on fracture and dislocation disorders, as a basic oral health care. Therefore, needless to say, this society is deeply related with Pedodontics, Endodontics, Operative Dentistry, Biomaterials, Dental Radiology, Oral Surgery, Oral Pathology, Neuropathology, and Clinical Pathology.

Finally, I want to discuss the "SCIENCE" of Dental Traumatology with all of you in this conference.

Mitsutaka Kimura, DDS, PhD
President, Asian International Association of Dental Traumatology
President, Japan Association of Dental Traumatology
Message from the Dean

Held in partnership with the Japan Association of Dental Traumatology (JADT), this international conference encourages clinicians, educators, and researchers to meet and exchange ideas in a scientific meeting that stimulates learning, teaching, and dialogue, by bringing together people from Asia, and beyond. Held every two years, the Asian International Association of Dental Traumatology (AADT) has become a source of knowledge among young and expert researchers. This year, the 9th AADT will be held in Cebu City, the Philippines.

Cebu is considered to be the Philippine's oldest city and the first capital of the Philippines. It is also considered to be the birthplace of Christianity in the Far East. It holds a prominent place in the archipelago as the capital of the South and is considered to be the most dynamic island in the country with the most ethnically diverse population. It is also a convenient place for business and leisure. Cebu has the oldest street and school in the Philippines. Thus, it will be the best venue for our scientific meeting.

I am confident that this meeting will afford exceptional opportunities for renewing old acquaintances, making new contacts, networking, and facilitating partnerships across national, international, and disciplinary borders. I am also hopeful that it will encourage young Filipinos to have a research oriented mind side by side with their clinical skills.

Together with the JADT and local organizing committee at Southwestern University PHINMA, I have no doubt that the 9th AADT Conference will offer a remarkable opportunity for the sharing of research and best practice, especially in Dental Traumatology studies and its related fields. I expect the resultant professional and personal collaborations to endure for many years, and I look forward to seeing you in Cebu!

Rodivick Olofernes-Docor, DMD, PhD
Dean, College of Dentistry
Southwestern University PHINMA
Cebu City, Philippines
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The Constitution of the Asian International Association of Dental Traumatology

Adopted on November 13, 2004
Partially revised on April 21, 2007

Name
This organization is named: Asian International Association of Dental Traumatology, herein referred to as the AADT or the Association

Objectives
The Association is established to further research into all aspects of dental traumatology, to encourage the development of preventive and therapeutic methods for dental trauma, to call public’s attention to dental trauma, and to promote cooperation and information exchanges between investigators in Asian countries.

Basic Functions
1. Organize conferences
2. Facilitate communications among Asian countries
3. Issue newsletters
4. Others

Membership
People who accept and obey the constitution of the AADT will be accepted as a member of the association.

Tax
1. The tax of the association shall be decided by the council and the general assembly.
2. The tax should be paid at the conference.
3. The operation of the association is based on sponsorships and other incomes.

Organization
1. The positions in the committee are: consultants, one honorary chairperson of the conference, one president, three vice presidents, two secretary-generals, standing directors, directors, and two auditors.
2. The term of office will be three association years, and reappointment is allowed.
3. The president shall be selected by the council and approved by the general assembly.
4. The president shall appoint the vice presidents, directors, and executive committee.
5. The president, vice presidents, and executive committee are the directors.
6. Regents shall be nominated by the council and determined by the general assembly.
7. Inspectors are selected from regents and determined by the general assembly.
8. Counselors, honorary chairperson of the conference, and secretary-generals shall be selected by the council and determined by the general assembly.
9. The president is representative of the association and is responsible for its administration.

Scientific Conference

Scientific conferences will be held once every two years.

Constitution and Bylaws

1. The constitutions shall be amended by the committee and approved by the council.
2. The committee shall determine the bylaws.

Bylaws

The election of the president

The president will be nominated by the counselors and appointed by council.

The place of the general assembly and the conference should be:

1. Applied by local organizations
2. Determined by the council

Official meetings:

1. The meeting of the council and the regents will be held once a year, at least.
2. More than half of the members in the council are required to attend the meeting of the council and the regents.

Short course of dental traumatology in Asia

In compliance with the wishes of a short course of dental traumatology, the president should hold it with the cooperation of the country and/or district.

Celebration and Condolence

Celebration and condolence will be left entirely to the president of AADT.

Letter of Appreciation

A letter of appreciation will be given to the president who served out his term and is not reappointed.
Past Conferences and Photos

1st Conference
Peking University, CHINA
November 2004

2nd Conference
Okayama University, JAPAN
September 2005

3rd Conference
Taipei Medical University, TAIWAN
April 2007

4th Conference
Peking University, CHINA
November 2009
5th Conference
Aichi Gakuin University, JAPAN
September 2011

6th Conference
University of Indonesia, INDONESIA
September 2013

7th Conference
Kyushu Dental University, JAPAN
July 2015

8th Conference
Mahidol University, THAILAND
November 2017
The 9th Conference of Asian International Association of Dental Traumatology (AADT)

March 7 - 8, 2020 Cebu City, Philippines

March 7, 2020 at SEDA Ayala Center Cebu Hotel
17:00 – 18:00  Registration
18:00 – 18:30  Executive Meeting
19:00 – 21:00  Welcome Reception

March 8, 2020 at City Sports Club Cebu
08:30 – 08:50  Welcome Address: Dr. Chito Salazar, President SWU
08:50 – 09:30  Keynote Lecture: Prof. Mitsutaka Kimura, President AADT
09:30 – 10:00  Special Lecture 1: Dr. Melanie Karganilla, Philippines
10:00 – 10:20  Special Lecture 2: Dr. Takuya Shimada, Japan
10:20 – 10:40  Special Lecture 3: Dr. Kumiko Nozaka, Japan
10:40 – 10:50  Coffee Break
10:50 – 11:10  Special Lecture 4: Dr. Toshiaki Hashimoto, Japan
11:10 – 11:30  Special Lecture 5: Dr. Yasutaka Yawaka, Japan
11:30 – 12:00  Special Lecture 6: Dr. Stephen Almonte, Philippines
12:00 – 13:00  Lunch Break
13:00 – 13:20  Special Lecture 7: Dr. Norimasa Okafuji, Japan
13:20 – 13:40  Special Lecture 8: Dr. Kazuyo Yamamoto, Japan
13:40 – 14:00  Special Lecture 9: Dr. Hitoshi Kawanabe, Japan
14:00 – 14:30  Special Lecture 10: Dr. Jose Vicente Araneta, Philippines
14:30 – 16:30  Oral Presentations
16:30 – 17:30  Poster Presentations
17:30 – 18:00  Closing Remarks

Dr. Rodivick Docor, Dean, College of Dentistry, SWU
Dr. Omar Rodis, Coordinator, 2020 Organizing Committee
Distribution of Giveaways
Keynote Lecture

08:50 – 09:30  Keynote Lecture: Prof. Mitsutaka Kimura (Japan)
Professor Emeritus, Kyushu Dental University
Clinical Significance of Peripheral Nerves from the Situation of Stomatology - The Mechanism of Neural Transmission from Periphery to Brain, from Birth through Adulthood

Special Lectures

09:30 – 10:00  Special Lecture 1: Dr. Melanie Ruth Karganilla (Philippines)
Oral Soft Tissues and Traumatic Injuries

10:00 – 10:20  Special Lecture 2: Dr. Takuya Shimada (Japan)
Oral soft tissue injury in children: Diagnosis, Treatment, Management, Current situation in Japan

10:20 – 10:40  Special Lecture 3: Dr. Kumiko Nozaka (Japan)
Clinical Study on the Abnormal Position of Maxillary Canines

10:50 – 11:10  Special Lecture 4: Dr. Toshiaki Hashimoto (Japan)
Clinical approach to crown fracture due to the dental trauma in the period of growth and development

11:10 – 11:30  Special Lecture 5: Dr. Yasutaka Yawaka (Japan)
Approach to outer root resorption of traumatized teeth

11:30 – 12:00  Special Lecture 6: Dr. Stephen Almonte (Philippines)
Periodontal Consideration in Fixed and Partial Removable Prosthodontics Therapy

13:00 – 13:20  Special Lecture 7: Dr. Norimasa Okafuji (Japan)
HSPs as Functional Factor of the Recovering Periodontal Ligament in due to Traumatic Mechanical Stress

13:20 – 13:40  Special Lecture 8: Dr. Kazuyo Yamamoto (Japan)
The Restoration of Traumatized Teeth with the Latest Bonding Techniques

13:40 – 14:00  Special Lecture 9: Dr. Hitoshi Kawanabe (Japan)
Clinical evaluation of combination therapy of dental trauma and orthodontic treatments

14:00 – 14:30  Special Lecture 10: Dr. Jose Vicente A. Araneta (Philippines)
Why GP’s should Include Temporary Anchoring Devices (TADS) in their Practice
Keynote Lecture

Mitsutaka Kimura
Professor Emeritus
Kyushu Dental University

Clinical Significance of Peripheral Nerves
from the Situation of Stomatology
- The Mechanism of Neural Transmission from Periphery to Brain, from Birth through Adulthood -

The developmental process of the brain and neurons will be presented in terms of establishing stages of cerebral limbic system (feelings), prefrontal cortex (controlling) and hypothalamus of brain stem (decision making) from childhood through adulthood. The main themes will be focused on the neurons of the newly completed cerebral cortex, the dynamics of nerve fiber over the period of eruption to completion of tooth and the mechanism of neural transmission from the periphery to the completed cerebral cortex.

Brief CV

Educational Background
1966 DDS, Graduated from Kyushu Dental University, Japan
1966 – 1973 Assistant Professor, Kyushu Dental University, Japan
1973 – 1976 Lecturer, Kyushu Dental University, Japan
1979 – 2005 Professor and Chairman, Pediatric Dentistry Kyushu Dental University, Japan
1981 Visiting Professor, University of California San Francisco (UCSF), USA
1993 – 1997 Dean of Graduate School, Kyushu Dental University, Japan
2005 – present Professor Emeritus, Kyushu Dental University, Japan

Professional Background
1998 – 2000 President, Japanese Society of Pediatric Dentistry
1997 – 2002 Director & Secretary General, Pediatric Dentistry Association of Asia (PDAA)
1998 – 2000 Editorial Board Director, Japanese Association for Dental Science
1999 – 2005 Director, Japanese Society of Pediatric and Oral Surgery
1996 – present Visiting Professor, School of Stomatology, Beijing University
2001 – present Guiding Professor, University of Indonesia
2001 – present President, Japan Association of Dental Traumatology (JADT)
2004 – present President, Asian International Association of Dental Traumatology (AADT)
2015 – present Fellow, International Association of Dental Traumatology (IADT)
**Oral Soft Tissues and Traumatic Injuries**

**Background**: Aside from infection and chronic inflammatory diseases, trauma-related lesions could affect the soft tissues of the oral cavity. It is not uncommon for dental practitioners to see patients with ulceration and erosions, cystic lesions, hyperkeratosis, soft-tissue growth, and even necrotic tissues. These lesions may actually be due to physical and mechanical, thermal, chemical, and even radiation injuries.

It is therefore important to recognize these lesions so that proper treatment and management could be instituted.

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**Brief CV**

**Educational Background**

1994  
DDM, University of the Philippines College of Dentistry, Philippines

2006 – 2008  
International Summer School in Clinical Periodontology and Implantology, Ruprecht-Karl University of Heidelberg, Germany

**Professional Background**

1994  
1st Place, December 1994 Board Exams for Dentists

2008  
Head, Oral Medicine Section, which comprises Oral Surgery, Periodontics, Oral Diagnosis and Endodontics, of the Department of Clinical Dental Health Sciences.

**Awards & Memberships**

Fellow, Philippine Board of Periodontology  
Certified Specialist, Periodontics  
Fellow, Academy of Dentistry International
Oral soft tissue injury in children: Diagnosis, Treatment, Management, Current situation in Japan

Background: Children who are in their growth and development stage, both mentally and physically, may consequently encounter injuries often caused by their inexperienced athletic and behavior judgment abilities. We will introduce the diagnosis, treatment, and management of oral soft tissue trauma in children that is primarily caused by toothbrush accidents.

Although various differences exist in the degree of damage, including the cases presented in the present study, many cases were followed up in terms of antibacterial drug administration and suturing, demonstrating efficient therapeutic outcomes; however, some patients had to be hospitalized. Furthermore, there have been registered accidents wherein the pharynx was pierced and this caused intracranial damage resulting in death. CT and MRI are promptly performed in cases where the wound is judged to be deep enough or when the vital signs exhibit abnormalities.

Brief CV

Educational Background
2009 DDS, Kagoshima University, School of Dentistry, Japan
2015 – present Yamaguchi University, Faculty of Medicine and Health Sciences, Japan

Professional Background
2009 – 2010 Department of Oral and Maxillofacial Surgery, Kyoto University Hospital. Kyoto, Japan
2010 Department of Oral and Maxillofacial Surgery, Ijinkai Takeda General Hospital, Japan
2011 – 2013 Department of Oral and Maxillofacial Surgery, Japanese Red Cross Society Wakayama Medical Center, Wakayama, Japan
2013 – 2015 Department of Oral and Maxillofacial Surgery, Shizuoka General Hospital, Japan
Clinical Study on the Abnormal Position of Maxillary Canines

**Background:** An ectopic position of an unerupted maxillary canine may cause abnormal root resorption of the lateral or/and central incisors. The purpose of this study was to review and examine treatment options for preventing such a result.

**Materials & Methods:** We reviewed panoramic radiographs of patients who visited the Aoba Dental Pediatric Clinic. The period of the dentitions examined was from the eruption of the bilateral maxillary central and lateral incisors to the completion of the eruption up to the first or second molars including bilateral maxillary canines. These cases were divided into the groups with and without denture guidance.

The locations of the canine tooth germs were classified into the following six types: ① apex of the primary canine, ② mesial to the apex of the primary canine, ③ between the apexes of the primary canine and the lateral incisor, ④ distal to the apex of the lateral incisor, ⑤ the apex of the lateral incisor, ⑥ the tooth germs located at locations other than these sites.

**Results:** If the canine tooth germ was located at ① or ② when the maxillary central and lateral incisors erupted, the eruption path of the canine was normal. However, when the canine tooth germ existed at ③, some types of denture guidance were conducted in one third of the cases. Denture guidance and fenestration were necessary when the canine tooth germ existed at ④ or ⑤. Recently, we have seen an increase of ectopic canine tooth germs in the site ⑥. Those germs were horizontally impacted on the palatal or labial sides, causing the root resorption of central incisors.

**Conclusion:** It is of importance in radiographic examination of the canine tooth germ at the eruption of maxillary central and lateral incisors for the establishment of the proper treatment plans.

**Brief CV**

**Professional Background**

1979 – 2001 Associate Professor, Department of Pediatric Dentistry, School of Dentistry, Iwate Medical University
2001 – 2002 Dentist, Department of Pediatric Dentistry, Morioka Children’s Hospital
2002 – present Dentist, Private Dental Office (Aoba Dental and Pediatric Dental Clinic)
Clinical approach to crown fracture due to the dental trauma in the period of growth and development

Background: During the period of development, trauma to tooth with immature root often occurs regardless of whether it is a deciduous tooth or permanent tooth, and it is necessary to take into consideration the growth of the tooth root. In the case of fracture fragment due to crown fracture, adhesion is attempted, and if not, repair is performed using CR crown, etc. In the case of pulp exposure, consideration of its size, time since injury, degree of infection, alignment status, etc. is made and treatment according to the situation such as direct pulp capping, partial pulpotomy (Cvek), pulpotomy, pulpectomy, infected root canal treatment is performed. In the case of tooth with immature root in which infection of only the dental pulp of the crown is suspected, apexogenesis is attempted. In the case of apical periodontitis due to central cusp fracture, etc., pulp revascularization or apexification is attempted. In any case, it is important to protect the Hertwig epithelial sheath involved in tooth root development as much as possible. It is important to perform examination from a comprehensive angle and take appropriate measures at the appropriate time with continuous observation.

Brief CV

Educational Background
1994 DDS, Fukuoka Dental College, Japan
1987 PhD, Kyushu Dental College, Japan

Professional Background
1979 – 1982 Assistant Professor, Pediatric Dentistry, Fukuoka Dental College, Japan
1982 – present Hashimoto Clinic of Pedodontics & Orthodontics
2010 – present Clinical Professor, Fukuoka Dental College

Awards & Memberships
Director of the Japan Association of Dental Traumatology
Standing Director in Asia of the International Association of Dental Traumatology
President of Kyushu Regional chapter of the Japanese Society of Pediatric Dentistry
Chairperson of Pediatric Oral Medical Society for the Study
Delegate of Public Interest Corporation Japanese Society of Pediatric Dentistry
Attending Physician of Japanese Trauma Dentistry Society
Yasutaka Yawaka  
Dentistry for Children and Disabled Persons  
Department of Oral Functional Science  
Faculty of Dental Medicine  
Hokkaido University, Sapporo, Japan  
Email: yawaka@den.hokudai.ac.jp

Approach to external root resorption of traumatized teeth

**Background:** External root resorption is observed in cases of replanted teeth with dental trauma. Root canal dressing containing calcium hydroxide (Ca(OH)2) is one recommended clinical approach for external root resorption. However, complete control of external resorption may not be possible due to certain factors such as the smear layer, which is formed by reaming and filing during root canal treatments. The smear layer plugs dentinal tubules and inhibits the effects of Ca(OH)2 as root canal dressing material.

Our studies showed root canal irrigation with ethylene-diamine-tetra-acetic-acid (EDTA) and sodium hypochlorite (NaOCl) with an ultrasonic device, is the most effective method to remove the smear layer. Additionally, an alkaline environment at the outer root surface due to ion diffusion from Ca(OH)2 was observed following this treatment.

Therefore, the combined use of EDTA and NaOCl with an ultrasonic device for root canal irrigation leads to good control of external root resorption.

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**Brief CV**

**Professional Background**
- 1990 – 2003: Assistant Professor, Pediatric Dentistry, Hokkaido University Dental Hospital
- 2003 – 2005: Lecturer, Oral Rehabilitation, Hokkaido University Hospital
- 2005 – present: Professor, Dentistry for Children and Disabled Persons, Department of Oral Functional Science, Graduate School of Dental Medicine, Hokkaido University.
Periodontal Considerations in Fixed and Partial Removable Prosthodontics Therapy

**Background:** The lecture will present various periodontal considerations for the success of prosthodontics both in fixed and removable partial dentures. The general practitioner needs to observe and be guided properly on the protocol of analyzing and having a closer look at the periodontal status of the remaining dentition prior to any prosthodontic procedures.

**Brief CV**

**Educational Background**
- 1999: Doctor of Dental Medicine, Centro Escolar University, Philippines
- 2006: Master of Science in Dentistry - Periodontics, Centro Escolar University, Philippines

**Professional Background**
- 2002: Advance Dental Education Program – Orthoontics, Philippines
- 2007: Implant and Surgery Training Program, Delos Santos Hospital, Philippines
- 2009: Implant and Surgery Training, Changgung Hospital, Taiwan.

**Awards & Memberships**
- Fellow, Philippine Academy of Implant Dentistry
- Fellow, Pierre Fauchard Academy
- Member, Philippine Prosthodontic Society Incorporated
- Board of Trustee, Philippine Dental Association Incorporated
- Member, International Congress of Oral Implantologists
**HSPs as Functional Factor of the Recovering Periodontal Ligament in due to Traumatic Mechanical Stress**

**Background:** Dental traumatic injury is caused by sudden force to the mouth and teeth. To investigate the histopathological traumatic changes and repair, we examined the reactions of the mouse periodontal tissues after receiving the mechanical stress occurring upon clinical application. Histopathological changes as well as the expressions of HSP27 and p-HSP27 in the periodontal tissues were examined after removal of the mechanical stress.

**Materials & Method:** A total of 40 8-week-old male ddY mice were used in the examination. Application of mechanical stress was performed according to the insertion of separator was performed following Waldo’s method. After 20 minutes (m), 1 hour (h), 3 h, 9 h, 24 h, 3 days (d) and 1 week (w), the periodontal tissues of the right maxillary molar region were removed.

**Results:** The increase in mechanical stress up to 3 hours led to pathological changes that caused a space in between stretched periodontal ligament fibrous bundles and fibroblasts as well as narrowing of the periodontal ligament space. Degenerative changes also occurred in the pressure side. Pathological changes did not only occur due to mechanical stress but also at the time of the release of mechanical stress exposure which increased over time. In the control group, both HSP27 and p-HSP27 were negative in the pressure side after mechanical stress was released 3 hours later. On the other hand, the tension side showed a strong positive reaction. The proteins were also expressed after 20 min, 1 hour, 3 hours and 9 hours. The strongest expression was observed at 24 hours. A decrease in the intensity of expression was observed 3 days and 1 week later.

**Conclusion:** The results suggest that HSP27 plays an important role in the recovery of injured cells in the periodontal tissues.

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**Brief CV**

**Professional Background**

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<thead>
<tr>
<th>Year</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987 – 2002</td>
<td>Assistant Professor</td>
<td>Department of Orthodontics, Matsumoto Dental University, Japan</td>
</tr>
<tr>
<td>2002 – 2003</td>
<td>Visiting Scholar</td>
<td>Department of Orthodontics, University of Washington, USA</td>
</tr>
<tr>
<td>2007 – present</td>
<td>Professor</td>
<td>Department of Hard Tissue Research, Matsumoto Dental University, Japan</td>
</tr>
<tr>
<td>2018 – present</td>
<td>Professor and Chair</td>
<td>Department of Orthodontics, Matsumoto Dental University, Japan</td>
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</tbody>
</table>
The Restoration of Traumatized Teeth with the Latest Bonding Techniques

**Background**: Bonding systems are now essential for dental treatment. Composite resin restoration, resin cement, fissure sealant, and direct bonding for orthodontics. In the field of dental traumatology, bonding is also applied to various regions. Especially, bonding systems for teeth have recently progressed markedly from the first-generation system targeting only enamel to the latest system, 1 Bottle-1Step (All in One) system. Resin bonding systems are now the leading part of restorative treatment based on Minimal Intervention Dentistry (MID) proposed by the FDI because, together with their esthetics, they are capable of minimizing the amount of cutting and conserving the healthy parts of teeth as much as possible, and there is no doubt that they will further develop in the future. Using adhesive resin, not only can the amount of tooth cutting be markedly decreased but also traumatized teeth previously requiring sacrifice, such as pulpectomy and tooth extraction, may be conserved by minimizing invasiveness depending on cases. Therefore, the use of adhesive resin promotes protection of the teeth. In this lecture, I would like to talk about the adhesion mechanism of bonding systems, proper use of different systems, and treatment methods of fractured tooth using bonding.

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**Brief CV**

**Educational Background**
1991 PhD, Osaka Dental University, Japan

**Professional Background**
1992 – 1993 Guest Researcher of RWTH Aachen University, Germany
2005 – present Professor and Chair, Department of Operative Dentistry, Osaka Dental University, Japan
2014 – present Vice Director of Osaka Dental University Hospital
Clinical evaluation of combination therapy of dental trauma and orthodontic treatments

**Background:** Tooth dislocation is often encountered in dental clinics and generally involves concussion, subluxation, lateral luxation, invagination, extrusion, and complete dislocation.

**Case:** In this study, we report the case of a patient who presented with a dislocated tooth along with maxillary protraction owing to labial inclination of maxillary incisors and moderate crowding of the mandibular lateral incisors. Combination therapy comprising treatment of the dislocated tooth, whitening, and orthodontic treatment was performed. The patient had a history of trauma. Orthodontic treatment was done for the ankylosed teeth. The patient was advised that root resorption of the tooth was likely to occur. Nonetheless, orthodontic treatment was performed according to the patient’s wishes.

**Discussion and Conclusion:** Kawai et al suggested that treating maxillary protraction at an early age is beneficial considering most injured patients show maxillary protrusion and injury to the maxillary incisors. They also suggested that examining the history of the injury at the initial visit is important because it will cause malocclusion. Combination therapy for a dislocated tooth owing to injury and orthodontic treatment is often required.

**Brief CV**

**Professional Background**
- 2005 – 2007: Associate Professor, Fukuoka Dental College, Japan
- 2007 – 2014: Assistant Director, Itoh Dental Hospital, Kumamoto, Japan
- 2014 – present: Associate Professor, Ohu University School of Dentistry, Japan

**Hitoshi Kawanabe**
Ohu University School of Dentistry
Japan
E-mail: kawanabe@hotmail.co.jp
Why GP’s should Include Temporary Anchoring Devices (TADS) in their Practice

Background: There is no doubt that the emergence of the use of temporary anchoring devices (TADs) in Orthodontics the past few years has eliminated the need for the traditional anchorages like the Transpalatal Arch (TPA), Nance Holding Arch, headgears, etc., and most traditional anchorages and had made treatment mechanics a little less complicated and in general, shortened treatment time. However, there are still a lot of dentists who still are not getting the advantages of TADs in their practice.

My presentation is about two cases that hopefully in my own small way, will convince my colleagues about the misconception of the use of TADs, what its true benefits are and how they will greatly benefit by its incorporation to their clinical practice.

Brief CV
Educational Background
1987 Doctor of Dental Medicine, Southwestern University, Cebu City, Philippines

Professional Background
1987 - present Faculty, Orthodontics, College of Dentistry, Southwestern University-Phinma
1993 - present Dentist, Araneta Dental Clinic, Philippines.
2019 - present Orthodontic Intern, Cebu Doctors University, Cebu City, Philippines
Oral Presentations

Session 1 14:30 – 15:30 (8 min presentation and 2 min Q&A)

OP 01 14:30 – 14:40 Dr. Arief Waskitho (Indonesia)
Botulinum toxin and cytokine therapy of orofacial neuropathic pain by trauma

OP 02 14:40 – 14:50 Dr. Makoto Saito (Japan)
A case of preserving teeth with root fractures by replantation in an interdisciplinary approach

OP 03 14:50 – 15:00 Dr. Nitesh Tewari (India)
Long-term effects of traumatic dental injuries of primary dentition on permanent successors

OP 04 15:00 – 15:10 Dr. Rosette Pagpaguitan (Philippines)
Ameloblastoma: Rare yet common

OP 05 15:10 – 15:20 Dr. Tsendsuren Khurel-Ochir (Mongolia)
p21 deficiency is susceptible to TMJ-Osteoarthritis with mechanical stress

OP 06 15:20 – 15:30 Dr. Ayako Yoshida-Yoshimitsu (Japan)
Safety education for elementary schools based on the occurrence of dental trauma in Japan

Session 2 15:30 – 16:30 (8 min presentation and 2 min Q&A)

OP 07 15:30 – 15:40 Dr. Resmi Raju (India)
A composite cell sheet fabrication and its usage in periodontal tissue regeneration

OP 08 15:40 – 15:50 Dr. Shuhei Kubo (Japan)
Replantation of Avulsed Immature Mandibular Permanent Central and Lateral Incisors: A Case Report

OP 09 15:50 – 16:00 Dr. Thaw Dar Oo (Myanmar)
Systemic circulatory influence on pulpal circulation in young adult human teeth

OP 10 16:00 – 16:10 Dr. Pornpoj Fuangtharnthip (Thailand)
Clinical consequences after dental trauma treatment

OP 11 16:10 – 16:20 Dr. Hirofumi Tsuji (Japan)
A follow-up case for 19 years in the maxillary central incisor with tooth crown fracture by dental trauma

OP 12 16:20 – 16:30 Dr. Ann Patrice Perolino (Philippines)
Consequences of Incompetent Root Canal Treatment
OP 01: Botulinum toxin and cytokine therapy of orofacial neuropathic pain by trauma

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Background: In Indonesia, 31.4 % of accident is on the road, and 11.9 % of accident is related to head injury. The number of maxillofacial injuries, which is the main etiological factor in maxillofacial fractures, is continuously increasing due to the rise in traffic congestion. In the facial area, zygomatic-orbital fracture is one of the results of road traffic accident, characterized by sensory neuropathy in the area of innervation of the infraorbital nerve. Here, we conducted an animal study mimicking the infraorbital nerve damage by trauma and whether Botulinum toxin (BoNT) and cytokine therapy could reduce orofacial neuropathic pain.

Materials & Methods: Male Sprague-Dawley rats were used in this study. We induced trigeminal neuropathic pain by infraorbital nerve constriction (IONC), measured as a decrease in the head withdrawal threshold. BoNT (100 pg in 0.1 ml of saline) or saline was intracutaneously administered at the center of the IONC side whisker pad three days after surgery. Cytokine therapy of recombinant IL-10 (0.4 μg/100 g) in PBS, anti-CXCL2 (66 μg/100 g) in PBS, or only PBS (control) was injected into IONC side trigeminal ganglion (total volume was 18 μl).

Results: BoNT peripheral side injection attenuated neuropathic pain. Recombinant IL-10 or anti-CXCL2 injection into trigeminal ganglia decreased pain behavior.

Conclusions: Our results show that BoNT, IL-10, or anti-CXCL2 are therapy options for neuropathic pain.

Brief CV

Educational Background
2002 – 2009 DDS, Universitas Gadjah Mada, Indonesia
2010 – 2014 MS, Universitas Gadjah Mada, Indonesia
2018 – present PhD Course, Tokushima University, Japan

Professional Background
2015 – present Lecturer, School of Dentistry Universitas Muhammadiyah Yogyakarta, Indonesia
2010 – present Private practice

Awards & Memberships
2019 Tokushima University, Research Award of Oral Sciences: Bronze Prize
2019 Member, Japanese Society of Stomatognathic Function
**OP 02: A case of preserving teeth with root fractures by replantation in an interdisciplinary approach**

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**Background:** A 56-year-old man. Initial visit: April 2014. Present history: In February 2014, he fell and fractured roots of teeth #12, #21 and #22. He was referred from the hospital departments of emergency and oral & maxillofacial surgery and presented to our clinic. The patient was a farmer who chewed vegetables by his front teeth to evaluate the quality. Therefore, he requested to preserve his front teeth.

**Treatment outcome:** We treated tooth #12 by tooth extraction and replantation, #21 by adhesion of broken pieces and #22 by extrusion. For all these teeth, ferrules were secured with crown prostheses were made. Prior to the crownwork, an orthotist had performed orthodontic treatment to improve excess overjet that increased the risk of the fractures.

**Discussion:** This treatment followed the desire of the patient. It may have been impossible to achieve the favorable result if any sole dentist was engaged in the patient. We collaborated with a dental surgeon and an orthotist in addition to a primary physician certified by the Japan Association of Dental Traumatology. The interdisciplinary approach was considered effective.

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**Brief CV**

**Educational Background**
1982 DDS, Aichi Gakuin University School of Dentistry

**Professional Background**
1982 – 1985 Medical Doctor, Shimane Medical University Department of Oral and Maxillofacial Surgery
1985 – present Director, Saito Dental Clinic, Izumo-shi

**Awards & Memberships**
Authorized Dentist and Instructor, Japan Association of Dental Traumatology  
Authorized Dentist, Japan Academy of Esthetic Dentistry  
Authorized Dentist, Society of Japan Clinical Dentistry
**Objective:** Traumatic dental injuries of the primary dentition (TDI-p) have a global prevalence of approximately 11%-47%. They have immediate and long-term effects. Original research analyzing the long-term sequelae of TDI-p on permanent dentition (LSP) are few in number. The aim of this study was to explore the correlation between age of TDI-p, type of TDI-p and LSP. **Material and Methods:** Retrospective analysis of patient data from 2008-2017, reporting with LSP due to TDI-p, was performed. Uniform protocols and complete radiographic-photographic records were analyzed. There were 638 LSP reported with 596 teeth having complete records. **Results:** There were 286 children with 153 males (53.5%) and 133 females (46.5%). Mean age of TDI-p causing LSP was 36.57 ± 11.51 months, with severity increasing in the younger age group. The highest number of LSP was associated with avulsion injuries (218, 36.58%), and the odds ratio of the type of TDI-p affect the severity of LSP was 2.0163. Mean age of reporting was 8.54 ± 2.19 years and was lowest for enamel discolorations. Most LSP were not associated with any associated feature (AF), although impaction was highest among all AF (63, 10.57%). **Conclusion:** Age and type of TDI-p affect LSP, with the former being the stronger determinant of its severity. Mean age of reporting of LSP is dependent upon both type of LSP and AF. LSP due to TDI-p can further be graded in terms of severity.
Background: Ameloblastoma has long been recognized as a rare, benign odontogenic tumor. Although rare, it is considered as one of the most common odontogenic tumor to date. Because of its characteristic persistent growth and its ability to produce marked facial deformity, ameloblastoma tends to be easily recognized even with a general practitioner.

Having the knowledge on the nature, progression and possible complications of ameloblastoma will lead to the creation of a more comprehensive treatment plan that would render the best long-term prognosis and management for the patient.

Brief CV

Educational Background
2015 DMD, Southwestern University PHINMA, Philippines

Professional Background
2018 Externship Program in Hospital Dentistry and Oral Surgery, Philippine General Hospital
2018 Faculty, Southwestern University PHINMA College of Dentistry, Philippines

Awards & Memberships
2016 First Place, Philippine Dental Licensure Examination
OP 05: p21 deficiency is susceptible to TMJ-Osteoarthritis with mechanical stress

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Background: The temporomandibular joint (TMJ) plays a critical role in speech, mastication, and swallowing. This bilateral, diarthrodial, and ginglymoid joint is not exempt to injury. Late complications of traumatic TMJ injuries include facial asymmetry, malocclusion, growth disturbance, osteoarthritis, and ankylosis. The cyclin-dependent kinase inhibitor p21 is identified as a potent inhibitor of cell cycle progression. Recently, it has been proposed that p21 is a regulator of transcription factor activity. Furthermore, p21 regulated the expression of MMP13 and aggrecan (ACAN). These molecules are believed to be the onset of TMJ-OA in mandibular cartilage. In this study, we evaluated the role of p21 in response to mechanical stress.

Materials and Methods: In in vivo study, eight-week-old p21+/+ and p21−/− mice were used. The TMJs were overloaded during a period of 10 days by application of a sliding plate on incisors to keep the mandibular position posterior by biting and upward. After the experimental period, all mice were sacrificed and the TMJs were dissected for histological, immunohistochemical and micro CT analyses.

Result and Discussion: HE staining and micro-CT analysis, p21−/− mice showed subchondral bone destruction and also p21−/− mice had thinner cartilage and smaller areas of proteoglycans than WT mice. Immunohistochemical analysis indicated that MMP-9 and MMP-13 positive cell numbers were significantly larger in WT mice with mechanical stress compared to control mice while ACAN positive cell numbers were lower in WT mice with mechanical stress compared to p21−/− mice with sliding plates.

Conclusion: Our results suggest that p21 in chondrocytes functions to maintain matrix synthesis by regulation of ACAN and MMP-13 expression. It is concluded that cell cycle related molecule p21 might regulate TMJ-OA pathogenesis in mice.

Brief CV

Educational Background
2008 – 2014 DDS, School of Dentistry, Mongolian National University of Medical Sciences
Ulaanbaatar, Mongolia
2015 Orthodontic Internship, Yonsei University School of Dentistry, South Korea

Professional Background
2014 – 2016 Dentist, Gandent Dental Clinic
2018 – present PhD Course, Tokushima University, Japan

Awards & Memberships
2019 Tokushima University, Research Award of Oral Sciences: Silver Prize
Objective: The purpose of this study was to conduct safety education based on the prevention and countermeasures of children's trauma status, especially dental trauma in elementary schools.

Methods: The latest data from the Japan Sports council were used. We analyzed the actual conditions of children's trauma in schools, especially oral teeth, and behavioral characteristics and educational situations in children's school life, classes, break between classes time, lunch break, after school.

Results: The situation of the children's dental trauma was as follows. (When, where, and what were they doing) (1) The diagnosis results of the children's dental trauma were dislocation, tooth fracture, etc. (2) The children's dental trauma were occurred by fall, collision, etc. (3) The children's dental trauma were occurred during break time, class, etc.

Conclusion: The characteristics of the children's dental trauma were revealed. Among the face injury, the dental trauma is the second highest after the eye injury. Abarticulation and Tooth Fracture consist mostly of the children's dental trauma. The case study of dental trauma leads some findings about agenda and consideration for the effective health education in school to enhance taking preventive measures for dental trauma.

Brief CV

Educational Background
1975 B.Ed., Kumamoto University, Japan
1997 M.Ed. in Graduate School of Education, Fukuoka University of Education, Japan

Professional Background
1997 – 2008 Lecturer, Faculty of Health Sciences and Welfare, Seinan Jo Gakuin University, Japan
2008 - 2017 Associate Professor, Faculty of Health Sciences and Welfare, Seinan Jo Gakuin University, Japan

Awards & Memberships
Executive Director, The Japanese Society for Education of Children
Director, Japan Association of Dental Traumatology
Executive Director, Kitakyushu Children’s Oral Health Association
The Japanese Association of School Health
Director, Japanese Association of Yo-go Teacher Education
OP 07: A composite cell sheet fabrication and its usage in periodontal tissue regeneration

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²Tokushima Bunri University, Japan
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Background: Various studies have reported that the prevalence of periodontal disease in India is 45%. Periodontal tissue regeneration requires simultaneous regeneration of 3 different tissues: cementum, periodontal ligament (PDL) and alveolar bone. Here, we developed a new periodontal tissue regeneration technique using cell sheet engineering.

Materials and Methods: By cell sheet engineering technology, 3 types of cell sheets were fabricated. Single cell sheets were made by either PDL cells or MC3T3-E1 cells. And a complex cell sheet was fabricated by layering PDL cells over MC3T3-E1 cells. Following ectopic and orthotopic transplantation of cell sheets, transplants were analyzed by histology, immunohistochemistry and micro-CT.

Results: Micro-CT, histology and immunohistochemistry revealed the presence of bone-like tissue and PDL-like fibers in ectopic and orthotopic transplants of complex cell sheet.

Conclusion: These results demonstrates the fabrication of a complex cell sheet and regeneration the PDL and bone tissue simultaneously in a periodontal tissue defect model.

Brief CV

Educational Background
2002 – 2008 BDS, SRM Dental College, India
2010 – 2013 MDS, SRM Dental College, India
2016 – present PhD Course, Tokushima University, Japan

Awards & Memberships
2013 First rank holder and gold medalist in MDS, SRM University, India
2013 Dr Udaya Raghav Reddy Memorial Award, SRM University, India
2018 – 2020 Otsuka Toshihiko Scholarship Scholar
2019 Research Award of Oral Sciences 2019, Tokushima University
2019 Young Researcher Award, Tokushima University
2019 Hosoi Kazuo Award, Tokushima University
2019 Koraku Award 2019, Tokushima University
OP 08: Replantation of Avulsed Immature Mandibular Permanent Central and Lateral Incisors: A Case Report

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² Department of Oral and Maxillofacial Surgery
Tokai Central Hospital, Gifu, Japan
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Background Tooth avulsion is one of the most serious of all dental injuries. In case of complete dislocation, replantation is possible when the local oral conditions are good. The most commonly affected teeth are the maxillary central incisors.

Case Report: This case report is regarding the replantation of the mandibular central and lateral incisors in an eight-year-old girl with hearing impairment who fell at school and visited our clinic approximately one hour after injury. The dislocated teeth were found and immersed in a preservative solution and brought with the patient. We immediately replanted those incisors and applied fixation for 3 weeks. Follow-up examinations were performed every 1 to 3 months. Three months after the injury, both the central and lateral incisors showed a positive reaction in dental pulp electro diagnosis findings. The patient was followed up until 12 months after injury, although no complications, such as crown discoloration, dental pulp cavity stenosis, or external root resorption, were observed. In addition, there were no suspicious findings in areas around the roots of the affected teeth. In the present case. We considered that the course might be clinically favorable without root canal treatment, as the condition from injury to replantation was good.

Brief CV

Educational Background
1986 PhD, Clinical Oral Pathology (Pediatric Dentistry), Tokyo Dental College

Professional Background
1986 – 1997 Assistant Professor, Department of Pediatric Dentistry, Tokyo Dental College
1997 – 2008 Senior Assistant Professor, Department of Pediatric Dentistry, Tokyo Dental College
2006 Visiting Scholar, Department of Pediatric Dentistry, School of Dentistry, University of California Los Angeles, USA
2008 – 2013 Senior Assistant Professor, Division of Pediatric Dentistry, Department of Clinical Oral Health Science, Tokyo Dental College
2013 – present Machida Oral Health Center, Special Needs Dental Clinic
Objective: The aim of this experiment was to investigate the condition of pulpal circulation of sound permanent teeth using Transmitted-light Plethysmography (TLP) under the systemic influence of passive circulatory stimulation with foot bath using warm water.

Materials and Methods: Thirty intact permanent maxillary central incisors in 30 volunteers (aged 25-35 years) with no history of cardiac disease and long-term medication were examined (approved by the Ethical Committee of the Graduate School of TMDU, No. D2017-033). An individual acrylic resin cap was fitted to each experimental tooth, and the photodiode and LED were fixed through a hole made on the labial and palatal side, respectively, of the cap. TLP with 525 nm LED and finger photoplethysmography were simultaneously recorded. All the subjects underwent foot bath (43°C warm water) for 30 minutes and TLP of the examined tooth, body temperature, blood pressure, heart rate, and skin blood flow were monitored. Values at -5 to 0 min (baseline), 25 to 30 min (foot warming), 30 to 35 min (just after foot warming) and 40 to 45 min (after removal of foot warming) were statistically analyzed using a repeated measures one-way ANOVA followed by Bonferroni post hoc test.

Results: The TLP amplitudes were gradually decreased along with the duration of foot warming, increased again just after removing the foot warming, and decreased significantly (P < 0.05) at the end of the experiment to the level similar to the baseline. The body temperature, heart rate and skin blood flow were increased during foot bath (P < 0.05) and gradually decreased after foot bath but mean arterial pressure did not change significantly.

Conclusion: Passive circulatory stimulus with foot warming caused a transient increase in pulpal blood flow followed by returning to its normal level, in healthy young adult human teeth.

Brief CV
Educational Background
2001 – 2006 BDS, University of Dental Medicine, Yangon, Myanmar
2016 – present PhD candidate, Tokyo Medical and Dental University, Graduate School of Dentistry, Japan
**Background**: It is widely accepted that various types of dental trauma can lead to a wide range of clinical consequences, even with or without immediate treatment. Unexpected injury brings out the different degree of damage and complications to oral tissues, most likely depending on site, severity, and teeth/tissues involved. Moreover, clinical consequences after the trauma depend on appropriateness of first aid, elapsed time, type of dentition and post-treatment care. These factors cause the management of dental trauma to become less straightforward and inevitably unpredictable. Therefore, it is worth learning the real clinical response of dental trauma cases in many aspects. The presentation will focus on the clinical consequences after long-term follow-up of those teeth experiencing trauma. Cases with tooth avulsion, as well as other cases with root fracture of deciduous and permanent teeth will be reported comparatively in order to find out any difference of their consequences.

**Brief CV**

**Educational Background**

1986-1994 Doctor of Dental Surgery (DDS), Mahidol University, Faculty of Dentistry, Thailand
1995-2000 Certificate of Training in Pediatric Dentistry, Tokyo Medical and Dental University, Japan
1995-2000 Ph.D. (Dental Science), Tokyo Medical and Dental University, Japan

**Professional Background**

1994-2004 Lecturer, Department of Advanced General Dentistry, Mahidol University, Faculty of Dentistry, Bangkok, Thailand
2005-present Assistant Professor, Department of Advanced General Dentistry, Mahidol University, Faculty of Dentistry,
2011-2012 Vice-chair, Thai Society of Pediatric Dentistry
2019-present Vice-president, Japan Dental Alumni Thailand (JDAT),
2019-present Chair of Department of Advanced General Dentistry, Mahidol University, Faculty of Dentistry, Bangkok, Thailand
Background: We introduce a follow-up case for 19 years in the maxillary central incisor with tooth crown fracture by dental trauma. When he was an eleven-year-old boy, a left maxillary central incisor with tooth crown fracture by dental trauma was injured at school. The dentist had treated to the crown restoration by resin after a pulp capping for the traumatic tooth. At 1 week after a treatment of the tooth, the patient visited our dental office. Occlusal and spontaneous pain occurred. I did pulpectomy. At one week later, the canal was filled with lateral pressurized roots with sealer and gutta percha points. No particular abnormality was observed in the X-ray image without subjective symptoms until 8 years and 4 months after the injury. Although subjective symptoms were not observed at 16 years and 3 months after the injury at all, radiolucent area was detected in root apex at X-ray examination. The root canal treatment was performed after then. However, two years later, root resection was performed because swelling was observed on the palate side of the apical part. In the case of traumatic teeth, it was suggested that a follow-up examination should be important for a long period of time even after normal treatment.

Brief CV
Educational Background
1984 DDS, Kyushu Dental University, Japan
1988 PhD, Pediatric Dentistry, Kyushu Dental University, Japan
Background: A root canal fails when a tooth that has been previously treated becomes infected. If this infection is allowed to continue to develop without proper treatment, it can potentially spread to other teeth in the area and cause illness in other parts of the body. Experience and extra training plays a vital role in treatment outcome.
Poster Presentations

PP 01  Dr. Masao Irie (Japan)
Highly-viscous glass-ionomer cement for filling: Interfacial Gap-formation in Class I restoration and Mechanical properties

PP 02  Dr. Daisen Soga (Japan)
Clinical response to outpatient dentistry due to trauma

PP 03  Dr. Takeshi Kawai (Japan)
A case of compound odontoma which developed inferior alveolar nerve palsy

PP 04  Dr. Fujio Mizutani (Japan)
Development and effectiveness of high-absorption fine calcium (NANO-UNICAL)

PP 05  Dr. Yuriko Suruga (Japan)
Two cases of crown fractures due to trauma

PP 06  Dr. Yuta Inoue (Japan)
Dental treatment for tooth dislocation due to injury

PP 07  Dr. Sho Odawara (Japan)
Clinical response to outpatient dentistry due to trauma

PP 08  Dr. Tadashi Yoshida (Japan)
A Case of the tooth loss due to the severe injury (permanent tooth)

PP 09  Dr. Miyako Noda (Japan)
Injury caused by slipping
PP 01: Highly-viscous glass-ionomer cement for filling: Interfacial Gap-formation in Class I restoration and Mechanical properties

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Department of Biomaterials, Okayama University
Graduate School of Medicine, Dentistry and Pharmaceutical Sciences
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Objective: One of the major concerns with highly-viscous glass ionomer cements (HV-GICs) is their ability to achieve effective initial interfacial gap-formation in restorative cavities. This in vitro study examined the initial stage (after one-day storage) of interfacial gap-formation in Class I restoration together with determination of associated mechanical properties (compressive strength and flexural strength).

Materials & Methods: Cavity preparation was made in occlusal surface of premolar teeth. Five HV-GICs were studied (Ketac Universal Aplicap, Ketac Molar Aplicap: 3M, Fuji IX GP, Fuji IX EXTRA, EQUIA Forte: GC, and two conventional glass-ionomer cements (C-GICs, Ketac Silver Aplicap: 3M, Fuji II: GC, as controls), with specimen sub-groups (n = 10 / group) for each property measured. After one-day storage and polishing, the restored teeth were sectioned in a mesio-distal direction through the center of the model Class I restorations. The presence or absence of interfacial-gaps was measured at x 1000 magnification at 14 points (each 0.5-mm apart) along the cavity restoration interface; (n=10; total points measured per group=140). Compressive & flexural strengths were measured (n=10/group).

Results: For HV-GICs and C-GICs, significant differences (p<0.05) in gap-incidence were observed. In the former case, 4-14 gaps were found. In the latter case, 21-24 gaps were observed. The compressive and flexural strengths of HV-GICs significantly increased compared to C-GICs. After one-day storage, a HV-GIC performed significantly better than its corresponding a C-GIC. Increasing the powder-liquid ratio is the primary reason for improving these results. This improvement is achieved by a reduction in the size of the glass particle. A number of variations led to a HV-GIC with improved sealing and mechanical properties.

Conclusion: It is thought that a HV-GIC is the useful and significant restorative material for some pediatric or geriatric patients.

Brief CV

Educational Background
1976 DDS, Josai Dental University
1976 – 1982 Instructor, Department of Dental Material, Josai Dental University
1981 PhD, Josai Dental University

Professional Background
1982 – 2001 Assistant Professor, Department of Dental Materials, Okayama University Dental School.
1984 – 1985 Visiting Researcher, Department of Dental Technology, Royal Dental College Copenhagen
2001 – present Assistant Professor, Department of Biomaterials, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Science
Background: Pediatric trauma occurs suddenly and most often make no complaints about pain and fear of dental care at the visit. Then first of all, you should check if your patient’s consciousness and brain condition are normal. If there is a suspicion of disturbance of consciousness, immediately introduce the patient to a doctor. If there is no disturbance of consciousness, it is necessary to listen exactly to when, where, and how the trauma has occurred, and to make a diagnosis of the oral cavity by checking that there is no abnormality in the whole body. For that end, it is necessary to carefully talk, behave, and explain how treatment will be performed, and remove as much as possible, the patient's anxiety about treatment.

The clinical response to infant children is changing due to the trend of the times, especially because younger patients are not able to cooperate with treatment for crying just by visiting a dental clinic. Further care must be taken in the clinical setting. To solve this situation, create a family clinic, have a regular visit to a dental clinic from a three-month checkup, and have the child practice dental treatment using the behavioral change method. It is important for a family to get used to a dental clinic and prepare for sudden accidents.

Based on the above, I would like to introduce how to deal with trauma at our clinic and explanations to patients and parents.

Brief CV

Educational Background
2016 DDS, Asahi University School of Dentistry
2016 – 2017 Clinical Resident, Kyushu Dental University

Professional Background
1982 – 2001 Deputy Director, Soga Dental Clinic

Awards & Memberships
Member, Kitakyushu Children's Oral Health Society
Member, Japan Oral Implant Society
Member, Japan Society for Trauma Dentistry

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PP 03: A case of compound odontoma which developed inferior alveolar nerve palsy

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Department of Oral and Maxillofacial Surgery,
Kanagawa Rehabilitation Hospital, Kannai-bashamichi Dental Office
email: kbdental2016@gmail.com

Background: Odontoma is an odontogenic tumor which proliferates in a similar way to hamartoma. It is known that odontoma has unique x-ray image and tissue characteristics. On the other hand, inferior alveolar nerve palsy primarily occurs from the inferior alveolar block injection or from nerve damage during minor surgical intervention of the oral cavity. Therefore, it is very rare for a nerve palsy caused by the odontoma. Here, we reported a case of the compound odontoma which developed inferior alveolar nerve palsy. The case was a 27-year-old female who visited a nearby clinic in May 2016 due to paralysis of near the right corner of the mouth. Her dental X-ray revealed an impacted lower right 5th teeth and an odontoma-like radiopaque tumor. She was referred to our department in June 2016. Medical history revealed that she started experiencing discomfort near the apical area of the lower right first bicuspid from January of 2016, and by April 2016, she started experiencing paralysis in the aforementioned area. Although her face was symmetrical, obtundation from the right corner of the mouth to the lower lip was acknowledged. From palpation of the oral cavity, a small bone-like lump was felt at the apical area of the lower right first bicuspid, thought to be the crown of the lower right second bicuspid. We did not find any abnormalities in the surrounding areas of the mucosa. From x-ray, we found lower right second bicuspid impacted in the apical area of the lower right first bicuspid. We also acknowledged an unclear region, which size was approximately 10×10mm in diameter, at right above the mandibular foramen near the lower right first bicuspid. After diagnosis of the complete impact of the lower right second bicuspid and the surrounding odontoma she underwent surgical intervention to remove the odontoma and extract the impacted lower right second bicuspid under local anesthesia with intravenous sedation on July 12th 2016. Since then, we have closely followed-up the patient on a regular basis. Histopathological diagnosis was compound odontoma.

Brief CV
Educational Background
2003 DDS, Tokyo Dental College
2017 PhD, Department of Oral Medicine, Oral and Maxillofacial Surgery, Tokyo Dental College
Professional Background
2016 Director, Kannai Bashamichi Dental Office
2018 Department of Oral and Maxillofacial Surgery, Kanagawa, Rehabilitation Hospital
Awards & Memberships
Visiting Implant Lecturer, Indiana University School of Dentistry
Board Certified Trainer and Fellow, Japanese Society for Advanced Implant Medicine
Board Certified Trainer and Member, Japan Association of Dental Traumatology
Board Certified Fellow of the Bio-Integration Society
Background: Universal Calcium Food Co., Ltd. has actively conducted research on calcium and produced calcium supplements we call “UNICAL” for 25 years. Our UNICAL is unique with its high ionization and high absorption rate in the human body. Regarding the mixture to allow UNICAL to be included in many food products, we discovered that we needed a more micronized form UNICAL. As a result, we started to develop “NANO-UNICAL”. We tried two methods to develop NANO-UNICAL. At first, we tried a wet grinding method using a bead mill. The size of the products was satisfactory. However, we abandoned this method as it proved to be costly and inorganic substances contaminated the calcium.

As a second way, we tested another method to discover if we could control the particle size safely without any contamination. We tested the production of calcium slurry in various conditions and made adjustments to determine the optimum particle size. We were able to successfully control the particle size to about 200 nm. Thereafter, we dried the calcium slurry with a spray dryer and obtained calcium powder. The size of the powder was 10 to 20 μm. With this production method, we can achieve a calcium powder that has stable dispersibility and little variation between lots. As a result, we decided to adopt this method.

NANO-UNICAL has 3 key features in addition to UNICAL’s features. First, it does not precipitate when added to beverages. Second, it doesn’t affect the color or taste of foods and doesn’t disrupt other food ingredients and has a smooth texture when it’s mixed into food items. Finally, it isn’t adversely affected by the dietary fiber in the intestinal absorption. We have acquired two patents for this development in Japan.

We developed various kinds of food products including NANO-UNICAL such as candies, beverages and so on. We believe these items will help people to take calcium more efficiently. Currently, we’re conducting further research.

Brief CV

Professional Background
2008 – 2010 Department of Industrial Chemistry, Graduate School of Engineering, Tokyo Polytechnic University
2010 – 2013 Oil stuff Inspectors’ Corporation
2013 – 2014 AGC Polymer Material Co., Ltd.
2014 – present Universal Calcium Food Co., Ltd.
PP 05: **Two cases of crown fractures due to trauma**

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1 Sukoyaka Dental and Pediatric Dental Clinic  
Sasamori, Ukai, Takizawa City, Iwate Prefecture, Japan  
2 Aoba Dental and Pediatric Dental Clinic 3-19-46  
Zenkun Morioka City, Iwate Prefecture, Japan  
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**Background:** We herein report two cases of reattachment of coronally-fractured teeth in challenging conditions for adhesive bonding.

**Case 1:** Age at injury: 14 years and nine months  
Chief Complaint: Coronal fracture of the left maxillary central incisor  
Present condition: The upper lip was significantly swollen with bleeding.  
Intraoral findings: A horizontal fracture line that runs across the middle of the left maxillary central incisor crown and dental pulp exposure were found.  
Treatment and follow-up: After cleaning the exposed pulp tissue, calcium hydroxide was applied for direct pulp capping, then polycarboxylate cement was applied. After splinting the tooth due to the discoloration of the traumatized tooth, the fractured fragment was removed, and endodontic therapy was conducted. The patient showed up our office after one year and five months due to the fracture of the same left maxillary central incisor. After the tooth was restored with a resin jacket crown, the tooth is presenting satisfactory progress.

**Case 2:** Age at injury: 8 years  
Chief complaint: Subluxation of the bilateral maxillary central incisors and a coronal fracture of the right central incisor  
History of present condition: The patient fell from the face to the floor and broke the crown of the tooth  
Present condition: The left maxillary central incisor was partially erupted, exposing half of the crown, and the two-thirds of the right central incisor crown was fractured with a punctiform pulp exposure.  
Treatment and follow-up: Direct pulp capping was conducted on the fractured surface using calcium hydroxide, and HY-Bond™ Polycarboxylate Cement was applied on the entire surface. Then, the teeth were splinted. The fragment was placed in saline and stored in a refrigerator. After about one year and two months, confirming the apex formation was complete, the fragment was bonded to the fractured surface. The tooth was vital.

**Brief CV**

**Professional Background**

1990 – 2000 Teaching Associate Department of Pediatric Dentistry, School of Dentistry, Iwate Medical University, Japan  
2006 – present Private Dental Office, Sukoyaka Dental and Pediatric Dental Clinic
PP 06: Dental treatment for tooth dislocation due to injury

Yuta Inoue 1, Hideto Inoue 2, Yoshihiro Sakamoto 2
1 Berries Clinic, Kita-Kyushu City
2 Inoue Hideto Dental Implant Clinic, Kita-Kyushu City
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Background: The patient is a 52-year-old male. His four maxillary anterior teeth were dislocated by injury (hit directly on the face by a ball while playing baseball) when he was about 30 years old, and since then he was using a conus denture. He visited our clinic on 22th of January in 2002. Requesting implant treatment and to restore the contour of the gingiva to its original shape. According to a panorama radiograph and CT scans, bone defect was extensive. The treatment plan was to conduct bone grafting in the region with extensive bone defect, and placing implants after the bone volume has been augmented.

March 27, 2002: The implant was placed at the portion of upper right central and side incisor. The implant was covered with covering screw after placement, and Bio-oss was applied. Since left maxillary alveolar ridge showed extensive bone resorption in every direction, we removed a bone graft from the mandibular corpus and fixed it to the maxillary bone by the pins. About 6 months after the operation, the survival of the bone graft was confirmed by clinical and radiological examinations. The pins were removed and one implant was placed into the grafted bone area.

May 17, 2004: The patient received treatment for the preparation of the attachments of screw-on type prosthesis and gingival contouring.

February 2019: The prognosis has been favorable without any trouble for about 14 years 9 month up to date. The patient is satisfied functionally aesthetically

The combined therapy of bone graft and implant treatments was effective for improvement in dentition and esthetics for the defect due to trauma.

Brief CV

Educational Background
2009 DDS, Matsumoto Dental University, Japan

Professional Background
2009 – 2010 Kyushu Dental University Hospital
2010 – 2019 Inoue Hideto Dental Implant Clinic
**Background:** Patient is 48 years old and female. I visited our emergency department because of a trauma caused by a fall. The patient was admitted to the hospital because of complete dislocation of the maxillary left central incisor, fracture of the maxillary right central incisor tooth, bilateral temporomandibular joint fracture, etc.

Since the maxillary bilateral central incisors could not be replanted, the root fractures were removed under local anesthesia. The dislocated and extracted teeth were stored and processed into Autogenous tooth bone graft material. Bone was constructed using autogenous tooth bone graft material, and then she implanted dental implant. Although 5 years have passed since the last prosthesis finished, the progress is good.

**Brief CV**

**Professional Background**

2010 – 2012 Medical staff, Department of Dental Materials, Rakuwakai Otowa Hospital
Kyoto Oral Health Center, Kyoto, Japan.

2013 – 2017 Medical staff, Division of Oral and Maxillofacial Surgery, Matsue City Hospital

2018 – 2019 Assistant manager, Division of Oral and Maxillofacial Surgery, Matsue City Hospital
PP 08: A Case of the tooth loss due to the severe Injury (permanent tooth)

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Background: Some fractures of the anterior teeth happen due to unexpected contact or accident. However, it is very rare for 4 maxillary front teeth to fall off, all at once. With good progress, after following-up for four years and four months, I report the summary.

Case: The patient is male, born in 2002, and 9 years old. He fell down and got a blow on the face in playground equipment at the school at 11:00 AM on February 10, 2012. The teeth which fell off at once by the injury were four but one of four teeth was lost, so I replanted the remaining three of them.

Convalescence of luxated tooth are key for periodontal cell membrane. This patient came for treatment after 80 minutes have passed from the time of injury. But fortunately, as for the progress, it was good because there was no infection of the alveolar bone. Because the patient is a 14-year-old child, I need to wait for a while until 18 years of age that is for the last time prosthetic measures age.

Examination: Most tooth injuries affect the 4 maxillary front teeth. This goes down due to anatomy properties of the oral cavity. As it projects as hard tissue, it easily receives external force. To reduce the loss of teeth due to the tooth injury, schools should have stock solutions for tooth storage and careful observation following the tooth injury.

Brief CV

Educational Background
1993    DDS, Osaka Dental University
2016    PhD, Kyushu Dental University

Professional Background
1993 – present  Director, Yoshida Dental Clinic, Sakai City, Osaka, Japan.

Awards & Memberships
Authorized Dentist and Instructor, Japan Association of Dental Traumatology
Specialist, Japanese Society of Oral Implantology
Authorized Dentist, International Congress of Oral Implantologists
PP 09: **Injury caused by slipping**

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**Background:** Oral trauma occurring during sports has increased in recent decades, especially among young students in Japan. The number of students interested in football has hiked since the launch of the Japanese professional football league in 1990s. Since then, the number of oral injuries has surged among young soccer players. Despite this situation, countermeasures against safety have been delayed. This is a report of a treatment of lip laceration, alveolar bone fracture and tooth complete dislocation case that occurred due to lack of wearing a mouth guard.

**Patient:** A 16-year-old male, and made first visit on October 1, 2013.

**History of the present complaint:** While playing football during a club activity, the ball hit the mouth with LR1 LR2 LL1 alveolar bone fracture and UR1 tooth complete dislocation.

**Treatment outcome:** Promptly rectified UR2 UR1 UL1, reduced and fixed with dental adhesive cement using NITI white coated wire. The alveolar bone fracture of the LR2 LR1 LL1 part was invasively fixed. Three days later, root canal treatment was performed. After three months, the wire was removed as the prognosis was good. Currently, it is still stable after four years.

**Discussion:** Other treatment methods were examined, but there was no applicable option. As a result, the treatment that was applied promoted healed the injury.

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**Brief CV**

**Educational Background**
1993 DDS, Osaka Dental University, Japan

**Professional Background**
2004 Vice Director, Noda Dental Clinic, Komatsu City, Ishikawa, Japan
2016 Internship, Kyushu Dental University, Japan

**Awards & Memberships**
Member, Japan Association of Dental Traumatology
Member, Japanese Society of Oral Implantology
Member, Japanese Society of Oral and Maxillofacial Surgeons
President of Asian International Association of Dental Traumatology (AADT):
Professor Emeritus Dr. Mitsutaka Kimura

Chair of Organizing Committee in Philippine:
Dr. Omar Rodis

Organizing Committee in Japan:
Dr. Masao Irie, Dr. Takashi Asano, Dr. Norihiro Sonoi