

English 学内発表会

An Opportunity to Improve Your Oral Presentation Skills

日 時：平成24年3月23日（金） 17時00分より

会 場：日本歯科大学生命歯学部 第2会議室

日本歯科大学歯学会

English学内発表会

An Opportunity to Improve Your Oral Presentation Skills

日 時：平成24年3月23日(金) 17時00分
会 場：日本歯科大学生命歯学部 第2会議室
発 表：10分、質疑応答：5分

【Opening address】 17:00~17:05

【Special Lecture】 17:05~17:30

My Seven-Point Checklist for English Presentations
Prof. Kazuhito ARAI

【Oral presentation session 1】 17:35~17:55

Chairperson : Assoc. Prof. Kenichiro KIKUCHI

1. A Torsion Test of Dental Restoration Materials

Seto M, Watanabe F

The Nippon Dental University School of Life Dentistry at Niigata, Department of Crown and Bridge Prothodontics

【Oral presentation session 2】 18:00~18:20

Chairperson : Prof. Kazushi IMAI

2. Research on Timing of Primary Infections by Helicobacter pylori in Preschool-age Children

Ueda J

Oral and Maxillofacial Surgery, Niigata Hospital, The Nippon Dental University

【Oral presentation session 3】 18:25~18:45

Chairperson : Prof. Kiyoshi KONISHI

3. Immunohistochemical Studies of Organic Anion Transporters and Urate Transporter 1 Expression in Human Salivary Gland

Ikarashi R

Oral and Maxillofacial Surgery, Niigata Hospital, The Nippon Dental University

【Closing address】 18:50~18:55

My Seven-Point Checklist for English Presentations

Kazuhito Arai, DDS, DDS
Professor and Chair
Department of Orthodontics
School of Life Dentistry at Tokyo
Nippon Dental University
E-mail: drarai@ndu.ac.jp

Curriculum Vitae

1987	D. D. S., School of Dentistry at Tokyo, Nippon Dental University (NDU)
1993	D. D. Sc. in Orthodontics, Graduate School of Dentistry, NDU
2000	Visiting Assistant Professor, Department of Growth and Development (Orthodontics), Harvard School of Dental Medicine
2008	Active Member at Large, Angle Society (Eastern Component)
2009	Professor and Chair, Department of Orthodontics, NDU

Abstract

My Seven-Point Checklist

1. *What is the topic?*
Selection of a topic that fits the audience is the key to success.
2. *Is it simple?*
Word and sentence structure should be as simple as possible.
3. *Are there problems?*
Our accent is part of our character.
4. *Can we be interactive?*
We should try to have interactive communication with our audience.
5. *Practiced?*
Practice is critical, even for professional speakers.
6. *Familiar with the location?*
We need to check the audio/visual system before the presentation.
7. *Proud of our culture?*
Our unique culture can be a powerful tool for communication.

Reference:

Carmine Gallo. *The Presentation Secrets of Steve Jobs: How to Be Insanely Great in Front of Any Audience*, McGraw-Hill, 2009.

1. A Torsion Test of Dental Restoration Materials

Seto M, Watanabe F

The Nippon Dental University School of Life Dentistry at Niigata, Department of Crown and Bridge Prosthodontics

Introduction:

Concerning the strength test, various test methods such as tensile, flexure, hardness test and their standard values are regulated. Torsion stress is one of the mechanical forces occurring in the oral cavity. The purpose of this research is to investigate and compare with torsion strength for dental restoration materials as the common standard.

Materials and Methods:

Five kinds of metal and 3 kinds of brittle materials widely used in clinic were selected. The former were silver alloy (SHOFU Fine silver, following : Ag-a), gold and silver palladium alloy (GC Castwell, following : Pd-a), type IV gold alloy (SHOFU Pt rose, following : Au-a), cobalt-chromium alloy (SHOFU COVALTAN, following : Co-a) and titanium alloy (SHOFU TITAN 100, following : Ti-a) and the latter were alumina (Daimyou Ind. TIMICRON, following : Al), Y-TZP (TOSOH, following : YZ) and Ce-TZP/Al₂O₃ (Panasonic Nanozirconia, following : NZ). Metal specimens were casted following instructions of each manufacturers and measured as cast. Brittle specimens were fabricated with cutting processing by CAD/CAM and baking by each manufacturing instructions. In accordance with a test piece of tensile test, holding part and parallel part diameter of specimen were 5 and 2mm diameter and 10mm and 15mm in length respectively. In each condition, Test are repeated 6 times and a total of 48 specimens were measured. Torsion testing device (Shimadzu), AG-ZR was used. The torsion strength is statistically analyzed by one way ANOVA using SPSS.

Results:

In torsion strength, Ag-a, Pd-a, Ti-a, Au-a and Co-a were 59.0, 78.9, 74.5, 98.0 and 138.6 Ncm respectively and there were significant difference among each alloys except between Ti-a and Pd-a. Al, YZ and NZ were 72.3, 152.7 and 155.5 Ncm respectively. There were significant difference between Al and YZ, NZ.

In torsion angle, Ag-a, Pd-a, Ti-a, Au-a and Co-a were 197.6, 272.8, 270.9, 429.5 and 174.3 degree respectively and there were significant difference among each alloys except between Ag-a, Co-a and Pd-a, Ti-a. Al, YZ and NZ were 4.6, 15.0 and 24.0 degree respectively. There were significant difference.

In vickers hardness, Ag-a, Pd-a, Ti-a, Au-a and Co-a were 142, 206, 171, 242 and 372 respectively. Al, YZ and NZ were 1892, 1333 and 1171 respectively.

Discussion:

Co-a was maximum and was minimum and correlated with vickers hardness and higher torsion strength showed harder. While in brittle materials, they are not correlated and it was considered the affect of the brittleness of ceramics. Even in the brittle materials, NZ showed metal-like elongation. In torsion test, Al and YZ were fractured without constitutional deformation at the elastic limit but NZ showed stress-strain curve with metal-like constitutional deformation region and 10 degree higher than YZ in torsion angle.

Conclusions:

Torsion strength of dental restorative materials are examined for one of the index to know the mechanical strength. Torsion test is considered suitable for evaluating tough material such as Ce-TZP/Al₂O₃ which have ceramic like hardness and metal like extensible.

2. Research on Timing of Primary Infections by *Helicobacter pylori* in Preschool-age Children

Ueda J

Oral and Maxillofacial Surgery, Niigata Hospital, The Nippon Dental University

Introduction:

Primary infection by *Helicobacter pylori* (*H. pylori*) reportedly occurs mostly frequently in infants not more than 5 years of age; however, there have been few detailed studies of the timing of primary infections. For the purpose of this study is estimating the timing of *H. pylori* primary infections.

Materials and Methods:

Cohort study was undertaken over a 2-year period (2009-2010) on the detection of *H. pylori* DNA in saliva specimens by means of real-time PCR including 418 children who attend either a preschool or childcare center (3 locations) and their parents as subjects. Sterile rolled gauze chewed in the oral cavity for 2 min was used to collect saliva, which was then stored at -80 °C until being used in the study. DNA was extracted from 100 µl of saliva using QIA amp Mini Kit (QIAGEN Ltd, Crawley, UK). *H. pylori* DNA was then detected by the TaqMan method using a Step One Real-time PCR System (Applied Biosystems Japan, Ltd.).

Results:

The rates of detection of *H. pylori* DNA in preschool-age children tended to increase with age. In 2009, the rates were as follows: 3 years, 5.4%; 4 years, 6.3%; 5 years, 7.1%; and 6 years, 8.3%. In 2010, the rates were: 3 years, 2.8%; 4 years, 3.3%; 5 years, 11.4%; and 6 years, 16.7%. Over the 2-year period from 2009 to 2010, the rates were: 3 years, 4.1%; 4 years, 4.9%; 5 years, 10.0%; and 6 years, 13.3%. A significant difference was noted for children aged 4-5 years in 2010. Furthermore, *H. pylori* positivity rates for the mothers of children who were *H. pylori* positive were 45.5% and 64.3% in 2009 and 2010, respectively, whereas the positivity rates of mothers of *H. pylori* negative children were 16.9% and 17.4%, respectively; these rates were significantly higher in the former group than in the latter.

Discussion:

These findings support the observation that primary infection in preschool-age children also occurs in children under 3 years of age. The fact that there is a significant increase in *H. pylori* DNA detection rates among children at age 4-5 years suggests that the risk of *H. pylori* infection in this age group is also high, while the fact that rates of *H. pylori* positivity are high in the mothers of *H. pylori* positive children suggests that infection from mother to child is the most important factor.

3.Immunohistochemical Studies of Organic Anion Transporters and Urate Transporter 1 Expression in Human Salivary Gland

Ikarashi R

Oral and Maxillofacial Surgery, Niigata Hospital, The Nippon Dental University

Introduction:

Various substances including uric acid, organic acids and drugs are transported by organic anion transporters (OATs) in the kidney. In addition, a member of the OAT family, urate transporter 1 (URAT1), is involved in the reabsorption of uric acid from the renal tubule. Benzbromarone which is a drug widely used for the treatment of hyperuricemia inhibits URAT1-mediated uric acid reabsorption to enhance urinary excretion and lower blood uric acid level.

Our group previously observed higher salivary uric acid levels than serum levels in patients taking benzbromarone, and reported the possible existence of URAT1-like uric acid excretion mechanism in the salivary gland. In the present study, we performed an immunohistochemical investigation on the expression of OAT1-4 and URAT1 in salivary gland tissues including submandibular gland and parotid gland.

Materials and Methods:

Among the primary antibodies used, OAT1, OAT2, OAT3, and OAT4 were diluted 1/1000, and URAT1 was diluted 1/400. Then the samples were treated with EnVision™ System. DAB+(3-3'-Diaminobenzidine Tetrahydrochloride) Liquid was used for color development. After nucleus staining with hematoxylin, the sections were examined under a light microscope.

Results:

In the salivary gland, OAT1 was expressed in ductal cells. OAT2 was found both ductal cells and serous acinar cells, and weak expression was also observed in several nuclei. OAT3 expression was observed in serous acinar cells and nuclei, and OAT4 was expressed only in ductal cells. URAT1 expression was observed in the cytoplasm of ductal cells, and strong punctuate staining was seen in part of the supra-nuclear cytoplasm. The number of cells expressing URAT1 was smaller compared with OATs. In the kidney, however, OAT1-4 and URAT1 were strongly expressed on proximal renal tubules.

Discussion:

The present study confirmed the existence of OAT1-4 and URAT1 in salivary gland. These results may support our previous speculation that benzbromarone inhibits URAT1 to block uric acid reabsorption in the salivary gland, resulting in higher salivary uric acid levels than serum levels.