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6th Hiroshima Conference on Education and Science in Dentistry

**1965 - 2015
50th Anniversary Commemoration**

**BioDental Education and Research
Towards the Next 50 Years**

Hiroshima University



Faculty of Dentistry

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1965 - 2015
50th Anniversary Commemoration

6th Hiroshima Conference
on Education and Science in Dentistry

Proceedings of 6th Hiroshima Conference on Education and Science in Dentistry
October 23-25, 2015, in Hiroshima, Japan

Hiroshima University Faculty of Dentistry

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PREFACE

On behalf of organizing committee members of Hiroshima Conference and Hiroshima University Faculty of Dentistry, it is my great pleasure of extending to you an invitation to participate in 6th Hiroshima Conference on Education and Science in Dentistry with the theme, "BioDental Education and Research towards the Next 50 years - 50th Anniversary Commemoration" to be held in Hiroshima, Japan on October 23-25, 2015.

We held the 1st Hiroshima Conference on Education and Science in Dentistry to commemorate the 40th anniversary of the founding of the Faculty of Dentistry in January 2006. Time flies so fast and I am now filled with deep emotion when I look back the previous 10 years that have passed since the 1st Hiroshima Conference. Ten years ago, coincidentally, Dental technician school and Hygienist school (2-year college) were reorganized as one school and it started as School of Oral Health Sciences as 4-year university, which is doubling the joy of this commemorable occasion.

One of the important characteristics and uniqueness of this conference is its organization: you may notice education sessions and science sessions together in this as well as previous Hiroshima Conference. This idea was originated from the belief of the founder of Hiroshima Conference, Prof. Kurihara, "the advanced research is indispensable to the advanced education". Within these 10 years, our school has significantly grown and transformed under the key concept, BioDental education and research.

I strongly wish all of you to enjoy state of the art special lectures on science and education, presentations of young investigators from various countries, stimulate discussions, develop international and inter-school collaborations, and think together what we should do in dental education and research towards next 50 years! And please plan to join Hiroshima University Faculty of Dentistry 50th Anniversary Celebration at the room Sunflower on Oct 24 afternoon with our distinguished guests, international alumni and friends.

All the best,



Motoyuki Sugai, DDS, PhD

President, 6th Hiroshima Conference on Education and Science in Dentistry

Dean, Faculty of Dentistry Hiroshima University

Congratulatory Address on the 50th Anniversary of the HU Faculty of Dentistry

Today, on the occasion of the 50-year anniversary of the Hiroshima University Faculty of Dentistry, I would like to say a few words of congratulations.

The origins of Hiroshima University's Faculty of Dentistry can be traced back to April 1st, 1965, when it was established as the third national university's dental school after Tokyo Medical and Dental University and Osaka University's Faculty of Dentistry. The establishment of the Faculty met the demands of a broad range of Hiroshima Prefecture's population, and it was the Hiroshima Prefecture Dental Association which first proposed that the Faculty of Dentistry become an official part of the university.

In 2005, the School of Oral Health Science was founded, and since its inception it has greatly contributed to the creation of excellent dentists, dental technicians and dental hygienists, active throughout Japan.

The 21st century is an international era of low birth rates and longevity, and globalism extends to every part of the world. Also in the field of dentistry, global-standard knowledge and technical skills are required.

The Hiroshima University Faculty of Dentistry provides high level dental medicine, medical services and oral health science, based on life sciences. It also fosters dental specialists, able to be active in an aging society and globalized environment.

Additionally, in 2012 an "International Dental Course" was established, resulting in Hiroshima University accepting international students from all over Asia, and becoming a nationwide pioneer in teaching lectures both in English and Japanese. Thus, via this multi-cultural educational environment, our university is also making efforts to foster the future leaders of dental medi-

cine.

In 2013, Hiroshima University was elected to be part of the "Program for Promoting the Enhancement of Research Universities", together with 21 other institutions, and in 2014, our university became one of 13 members to take part in the "Top Global University Project" as a "Type A (Top type)" university.

Participating in these two projects means that Hiroshima University has the potential to "be ranked in the world's top 100 universities within the next ten years", which comprises one of the milestones along the road towards our long-term goal.

Looking ahead, Hiroshima University aims to become a "university with sustained world-wide fame and splendor even after 100 years", by continuously fostering "peace-pursuing, cultured personnel with international experience", amidst close cooperation with the Faculty of Dentistry, the Graduate School of Biomedical & Health Sciences and other departments.

I expect that the Faculty of Dentistry will continue to dedicate itself to producing excellent dental professionals who are active in global and local communities, always considering the perspective of their patients.

In conclusion, I would like to ask all of you here today for your continued understanding and support, and I would also like to offer a prayer for the continuing growth and prosperity of the Faculty.

Sincerely,

Mitsuo Ochi

President, Hiroshima University

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D-30 (15-1) Effect of Chitosan in Soft Tissue Healing Post Dental Extraction

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BACKGROUND : Chitosan is a deacetylated derivative of chitin, obtained from the hard outer skeleton of crustacean. In medical, it has been widely used for wound healing, skin grafts, haemodialysis and haemostasis. Whereas its utilization in post tooth extraction is limited.

OBJECTIVE : To evaluate the effectivity of chitosan on wound healing post simple dental extraction.

METHOD : Case control study on 20 subjects (male:female = 12:8) age 35-50, were divided equally into chitosan and control groups. All subjects were extracted 1 non-vital tooth. Post extraction clinical signs such as calor, rubor, tumor and dolor were recorded at day 2 and day 7. Chitosan gel was inserted into dental socket after tooth removal. No medication was given to all subjects.

Wilcoxon Singed-Rank test was used for data analysis. Ethical clearance No.144/KE/FKG/10/2014.

RESULTS : There are significant difference between chitosan and control group on dolor and tumor signs on day 2 ($P=0.001$; $P=0.03$) and day 7 ($P=0.012$; $P=0.029$). Whereas significant difference on rubor sign was found only on day 7 between both groups ($P=0.024$). There is no difference between both groups on calor on both days.

CONCLUSIONS : Chitosan could suppress inflammation after dental extraction especially reducing pain, oedema and redness of the injury tissue.

Key words : chitosan, dental extraction

D-31 (15-2) Effectivity of *Andrographis paniculata* Mouthwash in Healing of Recurrent Aphthous Stomatitis Lesion (Preliminary Research)

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BACKGROUND : In dental practice, patients often complaint of recurrent oral ulceration. One of common oral ulceration is recurrent aphthous stomatitis (RAS). The prevalence of this condition is around 20% in population. *Andrographis paniculata* is a plant that widely used in the medical field because of several effects such as antihepatoxic, anti-malarial, anti-inflammatory, antioxidant, antimicrobial, anti-cancer, antiviral, antivenom, analgesic and antipyretic. In oral mucosa, these *A. paniculata* has not been evaluated. Even more, mouthwash medicament for oral lesion is limited to several products.

OBJECTIVE : to identify *A. paniculata* effect on recovery of RAS lesion compared to chlorhexidine gluconate and tetracycline as a mouthwash.

METHOD : this experimental research used double blind randomized clinical trial design approach. The subjects were 15 patients having episode of RAS from Trisakti Dental Hospital, Indonesia. Subjects were divided into 3 groups, *A. paniculata* 0.6%, chlorhexidine gluconate 0.1 %, and tetracycline 1.6%. Pain score was assessed everyday.

Ulcer size was measured on day 1, 7 and 10. Ethical clearance No.156/KE/FKG/10/2014. Kruskal-Wallis test is used to analyze data.

RESULT : There is a difference found in reduction of pain score before and during therapy within each groups ($P=0.066$; $P=0.043$; $P=0.039$); but there was no difference in pain score before and during therapy between groups ($P=0.255$). There is no difference on duration of healing between all groups ($P=0.527$). Mean of duration of healing in *A. paniculata*, chlorhexidine gluconate and tetracycline groups are 4.8 days, 6.2 days, and 4.2 days. Based on the size of the lesion, there was no difference in lesion size reduction from pretreatment to 7 days treatment ($P=0.291$).

CONCLUSION : *A. paniculata* effect on the healing of RAS lesion similar to chlorhexidine gluconate and tetracycline.

Key words : *Andrographis paniculata*, aphthous stomatitis, healing.