



Emergency Drugs

1. To manage the more common medical emergencies encountered in general dental practice the following drugs should be available:
 - Glyceryl trinitrate (GTN) spray (400micrograms / dose)
 - Salbutamol aerosol inhaler (100micrograms / actuation)
 - Adrenaline injection (1:1000, 1mg/ml)
 - Aspirin dispersable (300mg)
 - Glucagon injection 1mg
 - Oral glucose solution / tablets / gel / powder
 - Midazolam 5mg/ml or 10mg/ml (buccal or intranasal)
 - Oxygen
2. Where possible drugs in solution should be in a pre-filled syringe.
3. Recommended: Intramuscular, Inhalation, Sublingual, Buccal and Intranasal route
Not Recommended: Intravenous route.
4. All drugs should be stored together in a purposely-designed 'Emergency Drug' storage container.
5. Oxygen cylinders should be of sufficient size to be easily portable but also allow for adequate flow rates, e.g., 10 litres per minute, until the arrival of an ambulance or the patient fully recovers. A full 'D' size cylinder contains 340 litres of oxygen and should allow a flow rate of 10 litres per minute for up to 30 minutes. Two such cylinders may be necessary to ensure the supply of oxygen does not fail when it is used in a medical emergency.

MOH Virtual Library

The Virtual Library facilitates to provide a one-stop search for health and medical information by combining various knowledge providers from the MOH libraries collection, global and health medical information resources so that it can be readily available and easily accessible for all MOH personnel.

Currently, 8 libraries under the Ministry of Health are participating in this project.

For more information log on to
<http://vlib.moh.gov.my>



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Volume
TEN
Dec'10

Journal Club, PPKK & KLPM

info update

Message from the Director

Editor in Chief's says.....

The year 2010 seeks Children Dental Centre and Dental Training College embarking on knowledge seeking major projects such as MS ISO 9001:2008 awareness and Continuous Professional Development Programmes. Thus, Info Update continues it's tradition for the past five years to uphold the similar objective as well.

This 10th. Edition emphasizes more on up-to-date clinical dentistry, new era of education approach and wellness. I hereby would like to take this opportunity to thank the Info Update editorial team for their effort. As we now step forward to the New Year, we should snatch moments for tranquil reflections and end the year with a wish that 2011 will be better.

Advance Happy New Year and Happy Reading!

Dr, Hasenah Mod Zaki

Acquiring knowledge is a necessity, updating it is a responsibility. Info Update as its namesake tries to collate some of the current information in dentistry. Although presented in summaries, the articles allow us a glimpse of what's new in dentistry that runs from clinical procedures, dental technologies to dental materials, to name some. In this tenth issue we have six articles to our name. I assure you reading them will stir your thoughts, and push you to read the full article. I believe the new information acquired will delight you. Explore the topic put forth on deep carious management and another topic of equal standing is assessment of pulp vitality. Do not stop there. We even have an educational topic of concern in the current light of teaching-learning advancement. To our contributors, thank you for the well chosen topics. In capturing the interest and curiosity of our readers, the topics should always cover the essence of scientific and clinical issues current today.

Our second issue for this year marks the end of 2010. How time flies, with each second, minute and hour slipping through our fingers in a speed beyond our catch. I would like to end this year with a note of gratitude to all the editorial members who has worked hard in ensuring that Info Update stays afloat. A special note is extended to our Director for her support. The editorial members must always continue to strive for the better, and I hope they will mastermind a new look for Info Update as we sail through into the new year.

To our readers, let us be rejuvenated in 2011!

Dr. Naziah Ahmad Azli

SYSTEMATIC REVIEWS ON ORAL HEALTH-RELATED QUALITY OF LIFE MEASUREMENTS FOR CHILDREN

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Msc Dental Public Health Thesis -Grey literature

The aims of the study were to systematically locate, assemble and assess the previous studies in order to obtain a reliable overview of the child Oral Health-Related Quality of Life (OHRQoL) measures. The specific objectives were to assess the methodology, development and evaluation of OHRQoL measures for children. In addition, the study intended to review the attributes and assess the implication for future development and application of OHRQoL measures for children.

A methodological systematic review was carried out for the period 1985 – July 2008 in accord with the Centre of Reviews and Dissemination (CRD) guidelines on systematic reviews. Literature search via electronic databases, hand-searching journal, reference list search and citation/author search of the English language publication were conducted. All OHRQoL measures (self-reported and/or proxy-reported) for use in children below 15 years of age (with some reliability and validity data) were included. Single dimension measures were excluded.

The results of the study revealed that there were six generic measures of OHRQoL measures for children identified from 48 papers which met the inclusion criteria as follows:

- Child Oral Health Quality of Life Questionnaire (COHQoL)
- Michigan Oral Health-related Quality of Life Scale
- Child Oral Impacts on Daily Performance (child-OIDP)
- Child Oral Health Impact Profile (COHIP)
- Early Child Oral Health Impact Scale (ECOHS)
- Infant and Toddler Quality of Life Questionnaire

Four of the measures were developed in USA, with child self-reported questionnaires. Likert scales were used most frequently to represent response choices. Items were presented in written format, but child-OIDP has picture-aids. All measures reported internal reliability (Cronbach's alpha) and reproducibility (ICC or kappa) above 0.70. Responsiveness testing was reported by the ECOHS.

Currently available measures have shortcomings such as unclear theoretical framework, lengthy and solely proxy-reported. There is limited number of OHRQoL measures to assess the child's perception and no validated OHRQoL instrument to assess the children's perception below 8 years-old. Therefore, there is a need to develop a generic OHRQoL measure which is age-specific for 5 to 6 years-old children and is both self-reported and proxy-rated. In addition, the development of condition specific OHRQoL measures for children to be used as evaluative instruments in clinical trials will provide information of the effectiveness of the intervention.

Summarized by: Dr. Azhani Ismail



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E-Learning Versus Classroom Instruction in Infection Control in a Dental Hygiene Program

Kandis V. Garland, R.D.H, M.S.

Journal of Dental Education, Volume 74, June 2010.

Increased demands on faculty time, pressure from administrators to control costs and increase student enrollment, and students' desire for convenient education have been identified as factors impacting decisions about classroom instruction. Utilizing e-learning technology may be one way to begin to address some of these issues. The purpose of this study was to evaluate e-learning versus classroom instruction in infection control by comparing outcomes of multiple-choice examination scores and clinical competency based examinations (CBE) between two groups of first year dental hygiene students. Potential advantages of e-learning reported in literature review include convenience for students, increased enrollment, flexibility, decreased cost, easy for faculty to update material, easier student tracking and greater retention of course information. The disadvantages reported are technical difficulties, faculty time needed for development, lack of technical resources and feeling of isolation/frustration for students.

A study was done on all first year students in a two plus two baccalaureate degree dental hygiene program. The two groups were similar in baseline characteristics, with the students having completed all prerequisite dental hygiene courses. All first year students in the fall 2008 semester had web-based modules and all first year students in the fall 2009 semester had classroom instruction in infection control. The contents of the two instructional units were comparable, based upon either written or online instructional materials.



Results of the independent t-test on the multiple choice examinations indicated a satisfactory significant difference existed between the two groups' mean scores on the multiple choice examination. The Fisher's exact test used to analyze the clinical competency based examination scores indicated no statistically significant difference between the two groups. The satisfactory significant in the multiple choice examination scores may be due to additional information at the end of lecture, group dynamics and also the classroom group were in closer contact with the content before the examination was given. Limitation of this evaluation is the use of non-randomized small sample, and thus findings are not generalizable to all dental hygiene students. This study also it did not utilize a student survey to examine variables such as satisfactory level with the delivery method and the amount of time and effort required to complete the coursework.

The findings of this study demonstrated very little difference between e-learning and classroom instruction for infection control content. Thus with a minimal difference, it appears that e-learning could be a viable alternative for teaching infection control program.

Summarized by : En. Iswardy Abdullah

THE CHALLENGES OF VALIDATING DIAGNOSTIC METHODS AND SELECTING APPROPRIATE GOLD STANDARDS

M.-C.N.J.M. Huysmans and C. Longbottom
Journal of Dental Research 83(Spec Iss C):C48-C52, 2004

Caries is a disease of mineral loss and caries lesions are symptoms of this disease. Caries diagnostic methods are usually methods for caries lesion detection and measurement. Caries lesion occurs on a continuous scale of tissue damage from subclinical surface changes to macroscopic cavities reaching the pulp. Any change of a lesion on this continuous scale offers the opportunity for the diagnosis of a disease activity or remission.

Research aimed at remineralizing agents may focus on lesions that are amenable to remineralization and select a method that will measure small changes in early lesions. General caries management strategies depend on detecting all stages of lesions development and methods covering early to late stages are preferred. Accuracy is the ability of a method to measure or detect what it purports to measure or detect. Validity of a diagnostic method is its ability to predict or determine the disease for which it is designed. These two are synonymous in caries diagnosis. It is important to take into account the parameter that the diagnostic method is evaluating. In most diagnostic method validations, it is necessary that the distribution of the disease in the sample reflect the distribution in the population in which the diagnostic method will be used. However, diagnostic methods may depend on clinical factors to very different degrees and clinical studies should be performed to explore the accuracy of methods being used.

As a conclusion from this article, radiographic methods seem to be the most suitable gold standards, for their direct relationship to mineral loss and the volume of the data they provide. For quantifying mineral content in small lesion, the standard of choice is transverse micro-radiography and microscopic inspection is for lesion depth validation.

Summarized by: Dr. Siti Salwa Idris

DENTAL TRIVIA

From: www.myhealth.gov.my

Oral Piercing

In recent years, oral piercing is becoming quite popular.

As with pierced ears, the metal jewelry used in oral piercing comes in different styles, including studs, barbells and rings. Common oral piercing sites include the tongue, the uvula, the lower and upper lips, the cheeks or even a combination of these sites.

Is It Safe?

Oral piercing has become a trend of self-expression but it poses greater health risks than piercing ears. The potential side effects of oral piercing include:

- Infection after an oral piercing may occur as our mouths contain millions of bacteria.
- Prolonged bleeding which may be difficult to control if a blood vessel is punctured during piercing.
- Pain and swelling - In extreme cases, a severely swollen tongue can restrict breathing.
- Abrasion and fracture of teeth and fillings.
- Allergic reaction to metals.
- Injury to the gums.
- Interference with normal oral function
 - excessive saliva flow can impede proper pronunciation
 - difficulty with mastication and swallowing
- Loss of sensation in the tongue.
- Transmission of diseases - a possible route for transmitting of hepatitis, Herpes Simplex Virus, syphilis, or Tetanus, particularly if infection control standards were not adhered to during the piercing procedure.



GREEN TEA AND ORAL HEALTH EXAMINED IN STUDY

British Dental Journal, Volume 268, No.9, 2010

"Drinking green tea may help promote healthy teeth and gums according to new research."

A study recently published in the *Journal of Periodontology*, analysed the periodontal health of 940 men and found that those who regularly drank green tea had superior periodontal health than subjects that consumed less green tea.

With origins dating back over 4,000 years, green tea has long been a popular beverage in Asian culture, and while ancient Chinese and Japanese medicine believed green tea consumption could cure disease and heal wounds, recent scientific studies are beginning to establish the potential health benefits of drinking green tea, especially in weight loss, heart health and cancer prevention.

Dr Yoshihiro Shimazaki of Kyushu University in Fukuoka, Japan and his team did this study, as many studies have shown that green tea possesses health benefits. His team investigates the impact of green tea consumption on periodontal health, especially considering the escalating emphasis on the connection between periodontal health and overall health.

Male participants aged 49-59 were examined on three indicators of periodontal disease: periodontal pocket depth (PD), clinical attachment loss (CAL) of gum tissue and bleeding on probing (BOP) of the gum tissue.

Researchers observed that for every one cup of green tea consumed per day, there was a decrease in all three indicators, therefore signifying a lower instance of periodontal disease in those subjects who regularly drank green tea. Researchers think green tea's ability to help reduce symptoms of periodontal disease may be due to the presence of the antioxidant catechin. Previous research has demonstrated antioxidant's ability to reduce inflammation in the body, and the indicators of periodontal disease measured in this study, PD, CAL and BOP, suggest the existence of an inflammatory response to periodontal bacteria in the mouth. By interfering with the body's inflammatory response to periodontal bacteria, green tea may actually help promote periodontal health, and ward off further disease.

Summarized by: Valambal

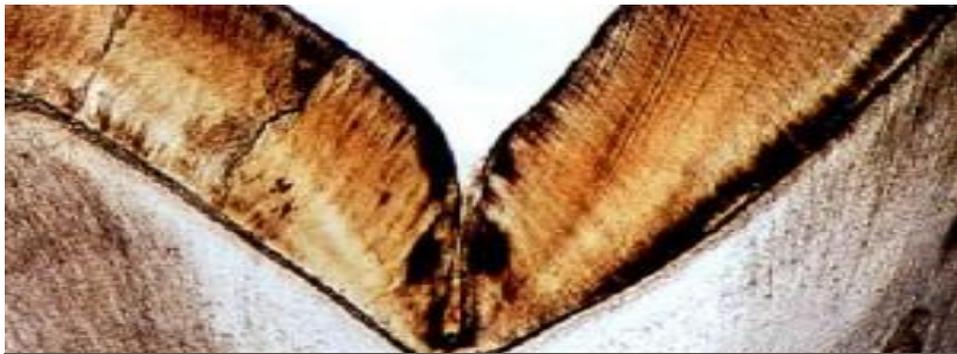


Grapefruits aren't just for breakfast anymore.

According to researchers at Pace University, grapefruit extract in toothpaste can kill oral viruses. The researchers also noted that adding aloe, zinc, and grapefruit extract to mouthwash and toothpaste kills viruses in the oral cavity, and thus eliminates their passage into the body.

What do tree branches, wild boar hairs, and nylon have in common?

The bristles of a toothbrush have been made from these items. People have been concerned about their dental hygiene since Egyptian times. Ancient tombs contained small tree branches whose ends had been frayed into soft fibers. In the 15th century, the Chinese made toothbrushes from the neck hairs of a Siberian wild boar. The present-day nylon toothbrush wasn't invented until 1937.



THE MONITORING OF DEEP CARIES LESIONS AFTER INCOMPLETE DENTINE CARIES REMOVAL: RESULTS AFTER 14-18 MONTHS

*E.F. Oliveira, G. Carminatti, V. Fontanella, M. Maltz
Clin Oral Invest (2006) 10: 134-139*

Isolation of the decayed dentine from the oral environment has shown to be effective in reducing the number of cariogenic microorganism. Clinicians always face with the problem of mechanical pulp exposure during complete caries removal. Pulp exposure can lead to pulpal infection and affect the prognosis of pulp vitality. To prevent mechanical exposure of the pulp chamber, stepwise excavation was introduced in this treatment which consists of incomplete removal of softened dentine during cavity preparation and leaving a layer of soft dentine over the pulp. This is followed by sealing of the cavity with a temporary restorative material to arrest caries progression and to promote tertiary dentine formation.

This study was done on 32 permanent posterior teeth. All of the teeth had no signs and symptoms of pulpal involvement prior to treatment and a pre-operative periapical radiograph was taken as a diagnosis aid. Stepwise technique is used as the restorative procedure and modified zinc oxide eugenol cement (IRM) was used as the temporary restorative cement. After 6-7 months, all of the teeth were evaluated for clinical symptoms and pulp sensitivity by means of the cold test. Other evaluation included hot, sweet or pressure, no spontaneous pain and radiograph. The temporary restoration was then removed and the dentine is assessed clinically and microbiologically. The teeth were then restored with light cure composite after calcium hydroxide cement was applied without further carious dentine removal. The same clinical and radiographic evaluations were done again after 14-18 months.

During the 18 months interval, one tooth was lost due to pulp necrosis and one had pulpal exposure during the removal of provisional sealing. Out of the 30 cases, 31 teeth showed no clinical symptoms. All teeth responded positively to cold test (pulp sensitivity test). Using radiographic image subtraction technique and scanning electronic microscopy, the image of pre and post caries removal showed the presence of zone of remineralization of residual sealed dentine after 14-18 months. Clinical analyses also showed colour and consistency of arrested lesions.

Removal of necrotic dentinal tissue is a vital and important step to prevent microbial metabolism. Placement of temporary restoration will help to isolate the bacteria from oral environment. These two steps encourage the deposition of tertiary dentine formation and arrest caries progression. However, complete caries removal in deep caries will increase the risk of mechanical exposure and further compromise the pulp vitality. This study provides a useful piece of information for clinicians during management of deep caries.

Summarized by: Dr. Ooi Ee Fen

the expert says >>>

....How To Diagnose Pulpal Status

*Safura A B, Malaysian Dental Journal (2008) 29(1)
31-33*

The assessment of pulp vitality is a crucial diagnosis procedure in the practice of endodontics. A definite diagnosis must be established with comprehensive investigation and records before any treatment is carried out.

Currently used vitality testers assess the integrity of the nerve fibres in the dentine pulp complex. However, these tests only indicate that the nerve fibres are functioning but do not give any indication of blood flow in the pulp, or whether it is partially damaged. A device that is able to determine the status of pulpal circulation is still in developing stage. In the meantime, present 'sensitivity tests' testers are only available to aid with the pulpal diagnosis.

Based on clinical and radiographic examinations, diagnosis of pulp vitality can be made clearly. Correct history taking can lead to important information on the signs and symptoms related to pulpal disease. When using thermal (cold or heat) and electrical pulp testing, to a healthy pulp it results in a transient sharp localized pain/tingling sensation, which lasts for a few seconds after removal of the stimulus. In contrast, a pulp response lasting more than half a minute after the removal of the stimulus often indicates an irreversible inflamed pulp. No response to the stimulation is normally regarded as an indication of a necrotic pulp.

Clinical examination is carried out by means of visual inspection of the crown, caries or status of restoration and mucosa. Investigations such as probing around the tooth, percussions test, palpation of the surrounding mucosa, tooth mobility and checking of the occlusion can also be used to determine the source of pain or discomfort. Another method is through radiological examination. Clinicians will be able to assess the anatomy and any pathology associated with the tooth.

The determination of pulp vitality requires a comprehensive investigation and interpretation depends upon a combination of many factors. An understanding of both the usefulness and limitations of pulp testing is essential for the effective use in clinical dentistry.

Summarized by : Dr Adilatul Hasanah bt. Musa



Funny Dentist Jokes Posted in Doctor Doctor Jokes, Funny Jokes

A dentist, after completing work on a patient, came to him begging.

Dentist: Could you help me?
Could you give out a few of your loudest, most painful screams?
Patient: Why? Doctor, it wasn't all that bad this time.
Dentist: There are so many people in the waiting room right now, and I don't want to miss the four o'clock ball game.



Dentist: I have to pull the aching tooth, but don't worry it will take just five minutes.
Patient: And how much will it cost?
Dentist: It's \$90.00.
Patient: \$90.00 for just a few minutes work??
Dentist: I can extract it very slowly if you like.