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Variations in germ-tube formation amongst oral Candida albicans isolates from HIV-infected and uninfected individuals. NAIS ROO, SAMARANAYAKE LF (Oral Biology Unit, Faculty of Dentistry, The University of Hong Kong, Hong Kong).

There is no data on germ-tube formation of C. albicans isolates from HIV-infected and uninfected individuals was investigated using a previously described method using bovine serum and TC 199 medium as GT inducers. Briefly, 0.5 mL of each of the "TC 199 medium" (Table 2) was incubated at 37°C for 90 min with an equal volume of bovine serum. One hundred Candida cells were counted for GT formation using a haemocytometer, under 400× magnification. In addition, a select group of isolates from both HIV-infected and uninfected individuals were prepared in the same manner (GT-lactococcus (20 μg/mL) and GT-pseudozyme (20 and 50 μg/mL) followed by serum to evaluate their effect on GT induction. Amongst the media tested, serum produced more GT compared with TC 199 medium (mean 25.2 - 35.7% and 20.0 - 36.2% respectively). GT formation of C. albicans isolates from HIV-infected and uninfected individuals was compared, a marginally high rate was observed amongst the former group (p < 0.05). Whereas apo-lactococcus (20 μg/mL) and glycerol (20 μg/mL) had no effect, lystosine at a concentration of 30 μg/mL suppressed the C. albicans GT formation. The foregoing indicates that serum is a better GT inducer compared with TC 199 medium, and isolates from HIV-infected individuals and those uninfected had no significant difference in GT formation sizes.

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Subgingival microflora and periodontal conditions in outpatients at Chulalongkorn University. H. NAPAWONGDEE, J. KUALWANASUCHATI, S. MANOONWONGSE, S. KUMNARAKHUN (Faculty of Dentistry, Chulalongkorn University, Thailand).

The aims of the present study were to evaluate the periodontal conditions using the CPTNT and the new loss of attachment index of WHO and also to investigate the presence of Porphyromonas gingivalis in subgingival plaque of the outpatients at the Faculty of Dentistry, Chulalongkorn University. A total of 200 patients were examined. By using the CPTNT only, it was found that more than 55% of the patients under the age of 25 had gingivitis and the minority had periodontitis. In contrast, more than 80% of the older age group had periodontitis. The use of the two indices together showed that most of the young age group with 4-5 mm probing depth did not have attachment loss. On the other hands, the patients above the age of 60 had a high rate of attachment loss. This might imply that the use of the CPTNT in the young age group seems to overestimate the prevalence and severity of periodontal destruction and vice versa in the older age group.

Thry samples of subgingival plaque were taken from either upper first or second molars (one sample per patient), where the sites were from the mesial gingival sulcus to the deep subgingival pockets (GT-lactococcus (4×10^7), P. gingivalis was identified by culture technique. Gram stain and the illumination test under light UV (360nm). P. gingivalis was detected in 80.97% of the examined periodontal, while none were found in the healthy sites. Hence, the proportion of this organism to anaerobic bacteria in the diseased group ranged 0.16-18.87% with median of 4.222%, hence supporting the role of P. gingivalis in advanced periodontitis in the Thai population

The potential effect of catechin in tea leaf on streptococcus mutans. R. R. GOMES (PEDIATRIC DENTISTRY, FACULTY OF DENTISTRY, PAULINHO DEODORO INSTITUTE, CURITIBA, PARANA, BRAZIL).

The objective of this study was to determine the minimal concentration (MIC) of catechin in tea that could inhibit the growth of Streptococcus mutans. This bacteria is predominant in caries formation. Based on the MIC it could be divided a used dilution concentration (MIC) of catechin in saliva.

The sample was scraping of caries lesion taken from children who visited Pediatric Dentistry scores of its. The research uses the highest concentration of catechin from green tea was done in The Tea Research Center Laboratory in Curitiba, Parana, Brazil. A serial dilution method of NCCLS (1985) was used to determine the minimal inhibitory concentration (MIC) of catechin in saliva from children. The microscopic examination and the identification of the cultures isolated that streptococcus mutans is detected predominant in caries. The serial dilution method of NCCLS (1985) was used to determine the minimal inhibitory concentration (MIC) of catechin in saliva from children. The statistical analysis using Two Ways Analysis of Variance followed by Multiple Comparison showed that the number of Streptococcus mutans decreased significantly in 0.5 μg concentration of catechin with the optimal contact time of 3 to 6 minutes. It is assumed that could be used as a mouthwash a used dilution concentration (MIC) of catechin in saliva (1 μg/mL) for 3 minutes (A. 2002). This study was supported by the SFIP - AOB, Loan No. 101-INDO.

Minimum inhibitory Concentration (MIC) of Antibacterial Agents Against Cariesogenic Organisms. MG BOETOSO & LF Samarawickrema. Prince Philip Dental Hospital, Hong Kong.

While some research has investigated the MIC of antibacterial agents against bacteria associated with plaque, there has been little on the MICs of bacteria specifically isolated from carious lesions. A total of thirty one bacteria: streptococcus (9), lactobacilli (10) and actinomyces (12); in particular the various lesions on adjacent surfaces of enamel and dentine. The motility of the agents was: streptococci, lactobacilli (0.06 μm/l) and actinomyces (0.24mm/l) was calculated to be 0.75°C for 90 min with an equal volume of bovine serum. One hundred Candida cells were counted for GT formation using a haemocytometer, under 400× magnification. In addition, a select group of isolates from both HIV-infected and uninfected individuals were prepared in the same manner (GT-lactococcus (20 μg/mL) and GT-pseudozyme (20 and 50 μg/mL) followed by serum to evaluate their effect on GT induction. Amongst the media tested, serum produced more GT compared with TC 199 medium (mean 25.2 - 35.7% and 20.0 - 36.2% respectively). GT formation of C. albicans isolates from HIV-infected and uninfected individuals was compared, a marginally high rate was observed amongst the former group (p < 0.05). Whereas apo-lactococcus (20 μg/mL) and glycerol (20 μg/mL) had no effect, lystosine at a concentration of 30 μg/mL suppressed the C. albicans GT formation. The foregoing indicates that serum is a better GT inducer compared with TC 199 medium, and isolates from HIV-infected individuals and those uninfected had no significant difference in GT formation sizes.

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Bacterial morphology of supragingival plaque in Chinese subjects. K.Y. ZEE*, L.P. SAMARANAYAKE (Department of Periodontology & Public Health, Oral Biology Unit, Faculty of Dentistry, The University of Hong Kong).

The aim of this study was to estimate the percentage distribution of different bacterial morphotypes of supragingival plaque in Chinese subjects by using the experimental gingivitis model. Seven healthy dental students were recruited from Prince Philip Dental Hospital. Each student had a single incisor surface brushed once-a-week professional prophylaxis for 3 weeks in order to ensure gingival health. In the fourth week, after prophylaxis, the subjects began a 21-day period without any mechanical or chemical plaque control. Plaque was sampled from the buccal, the lingual, and the incisal surfaces of the test tooth at the end of the week. A total of 42 samples were obtained. Gram-negative bacteria were predominant on the lingual surfaces (42.9%) while Gram-positive cocci were predominant on the buccal surfaces (57.1%). Further investigations have shown that vitamin K-dependent factors of anticoagulant bacteria may have different MIC values against cariesogenic bacteria.

Elastinolytic activity of staphylococcus aureus var. aureus. K. NOKEDA. National Defence Academy, Japan.

The concept of the present study was to investigate the elastinolytic activity and the cell wall material of Staphylococcus aureus var. aureus strains. The strains used in this study were isolated from the wounds of surgical patients. The strains were cultured on brain heart infusion agar and incubated at 37°C for 24 h. The culture supernatants were centrifuged at 10,000 g for 10 min to remove the bacterial cells. The supernatants were assayed for elastinolytic activity using the method described by Haimovici et al. (1975) with modifications. The results showed that the strains were able to degrade the elastinolytic activity of Staphylococcus aureus var. aureus strains. Further studies are needed to determine the nature of this protein in order to establish whether or not it is an angiotensin inhibitor.

This study was supported by RCO Grant #272/251, University of Hong Kong.

12 A Relation of Plasma Albumin Level to Calculus Deposit. Y. KIMAH, P. SAKARITA, KAMATA (Universitas Indonesia, Institut Pertanian Bogor, Pasifikoliv Gili, Indonesia).

Previous studies have shown that a group of proline rich proteins in human saliva can act as inhibitors of calculus formation. The present study was done to investigate the correlation between the plasma albumin level and calculus deposition in Chinese people. A total of 25 people were examined. Plasma albumin level was measured using spectrophotometer. Calculus index was used to assess calculus deposition. The results showed that there was a strong positive correlation between the plasma albumin level and calculus deposition (r = 0.42, p = 0.1). In conclusion, this study indicates that the plasma albumin level is one of the possible reasons which prevent the deposit of calculus on the tooth surface.

Bioclinical Differences Between Endodontal Bone and Intrabony Granulation Tissue. A. TWITTY*, A.M. RABIE and D. SHUM (Department of Children's Dentistry and Orthodontics, Department of Biochemistry, The University of Hong Kong).

In a qualitative study, we reported that connective intrabony granulation bone inducted more new bone than connective endodontal bone. In order to elucidate the factors behind the enhanced osteogenic activity of intrabony bone, biochemical analysis of the extracellular matrices of both types of bone was carried out in order to determine the presence of an endogenous inhibitor. Elongation of native bone (femur) and intrabony bone (mandible and parietal bone) were harvested from 3-4 month old New Zealand white rabbits. The bone was cleaned, dehydrated, and polished (particle size: 0.25μm) before being dehydrated in 0.3M HCl. Protein was extracted dialysitically using 4.4% NaHCO₃ and ultracentrifugation was used to get a 10-100Da molecular weight range. Sepharose 4B Chromatography further separated the protein before they were run on 15% SDS polyacrylamide gels. Protein and gel bands were visualized using Coomassie blue staining. The Figure shows that there is a difference in binding pattern between the two bone types with results showing the presence of a 28kDa protein in the bone marrow fraction of endodontal bone, while the bone marrow fraction of intrabony bone. Further investigations are necessary to determine the nature of this protein in order to establish whether or not it is an angiogenic inhibitor.

This study was supported by RCO Grant #272/251, University of Hong Kong.