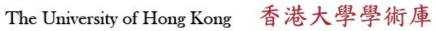| Title	Detection of anti-HIV-1 IgG antibodies in whole saliva by GACELISA and Western blot assays
Author(s)	Matee, MIN; Lyamuya, EFL; Simon, E; Mbena, EC; Mwinula, JH; Kagoma, C; Samaranayake, LP; Scheutz, F
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15 ASSOCIATION BETWEEN PERIODONTAL HEALTH AND HIV INFECTION IN A GROUP OF HIV-INFECTED INDIVIDUALS IN DAR ES SALAAM: J. MOSHI*, M.I. Matee*, F. Scheutz**, L. Andsage**r, A. M. Holm**, H. Holtet**, C. Kagoma*, N. Mpemba* *Muhimbili Medical Centre, Dar es Salaam, Tanzania ** Royal Dental College Aarhus University, Denmark.

This study investigated the association between periodontal health and HIV serostatus and the stage of HIV infection in a group of HIV-infected individuals in Dar es Salaam. 192 out of 227 HIV-infected individuals who were attending the AIDS clinical trial clinic at Muhimbili Medical Centre during the study (July to August, 1995) were enrolled as cases. 156 individuals from areas neighboring Muhimbili Medical Centre were enrolled as controls. Periodontal status was assessed by measuring bleeding tendency, pocket depth and attachment loss on 6 index teeth (16, 11, 26, 36, 31 and 4.6) using a graduate WHO probe and a mouth mirror.

HIV-infected individuals were grouped according to CD4+ lymphocyte count/mm^{3} (> 500, 200-500, < 200) and total lymphocyte count/mm^{3} (> 2000, 1000-2000, < 1000), and according to clinical presentation as HIV-seropositive (the asymptomatic) and AIDS (those with clinical features suggestive of the syndrome).

Our results did not show any significant association between bleeding tendency, pocket depth or attachment loss with either HIV serostatus or stage of HIV infection.
We conclude that neither HIV infection per se nor the stage of HIV infection is related with periodontal health in this group of patients.

16 DETECTION OF ANTI-HIV-1 IgG ANTIBODIES IN WHOLE SALIVA BY GACELISA AND WESTERN BLOT ASSAYS: M.I.N. MATEE*, E.F.L.Lyamuya*, E. Simon*, E.C. Mbena*, C. Kagoma*, L.P. Samaranayake*, F. Scheutz**. *Muhimbili Medical Centre, Dar es Salaam, Tanzania ** Dental College, University of Aarhus, Denmark

The aim of the present study was to assess the sensitivity, specificity, and feasibility of detecting anti-HIV-1 IgG antibodies in whole saliva collected from a group of Tanzanian adults.
Matched serum and saliva samples were collected from 158 HIV seropositive and 167 HIV seronegatives attending various clinics at Muhimbili Medical Centre in Dar es Salaam. Saliva samples were collected with the Omni-Sal TM device and tested for anti-HIV-1 IgG antibodies with two conventional Elias based on different principles. All subjects were then questioned whether they would, in future, prefer to provide blood, urine or saliva for HIV testing, and whether they found the saliva collecting device (the Omni-Sal TM assay or difficult to use. The time taken by patients to collect sufficient saliva sample was recorded in minutes. Our results indicate a 100% agreement between serum and saliva in the detection of HIV infection. Many patients preferred to provide saliva (65%) rather than serum (23%) or urine (12%). The Omni-SAL TM saliva collecting system was easy for 96%, difficult for 1.5%, while 2.5% of the subjects had no opinion. The time taken to collect enough sample was less than 3 minutes in 98% of the individuals. Our results suggest that saliva is a reliable specimen for screening and diagnosis of HIV infection and is a suitable epidemiological tool for estimating the magnitude of HIV infection in a population.

17 THE ROLE OF HELICOBACTER PHYLORI IN ORAL LESIONS: E. Y. ELOCHU* Dept. Oral Surgery Mulago Hospital Complex, P.O. Box 7051 Kampala, Uganda.

This study was designed to demonstrate the presence of Helicobacter pylori in non-specific ulcers, oral carcinoma, and papilloma.

25 cases including non-specific ulcers oral carcinoma and oral papilloma were selected for immunohistological analysis.

Mouse anti-Helicobacter pylori monoclonal antibody HPN(32) was used for the detection of Helicobacter in paraffin-embedded tissue sections. Positive staining sections were examined by electron microscopy for detailed morphology of the stained elements.

Details of age, sex, size, duration of lesion, smoking and medications were sought from the patients records. Immunostaining of organisms consistent with helicobacter pylori was found in 4 out of 25 (16%) of the cases. Electron microscopy confirmed the bacterial morphology as consistent with Helicobacter pylori in 3 of these cases. All the positively stained lesions had been present for more than 6 months. The apparent predominance of positive staining in tongue lesions could not be confirmed on statistical grounds. Other factors like age and sex could not be related to the positive findings.

The presence of helicobacter pylori in this tissue may actually suggest its role as a risk factor in these diseases as this is suggested by their role in the development of the gastrointestinal tract pathology.
This study indicates that Helicobacter pylori can be found in non-specific oral ulcers, in oral carcinoma and papilloma in some patients.

18 ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF BACTERIA ISOLATED FROM PYOGENIC ORO-FACIAL INFECTIONS IN MUHIMBILI MEDICAL CENTRE IN DAR ES SALAAM: H. NGUVUMALI*,). Moshy, M.I. Matee, Muhimbili Medical Centre, Dar es Salaam, Tanzania.

This study investigated the types of bacteria isolated from pyogenic oro-facial infections among patients referred to the Department of Oral Surgery and Oral Pathology in Muhimbili and their sensitivity to antibiotics which are commonly prescribed at the hospital. A total of 92 patients, 55 males and 37 females with pyogenic oro-facial infections were enrolled between March and September, 1995. Pus was collected from the lesions and incubated both aerobically and anaerobically on iso-sensitest agar plates for 48 hours. Pure growth were identified by gram-stain and biochemical tests including: the Minitek (BBL), Api-20-Strep (Analytab products) and Rapid ID 32A (BioMerieux SA) according to the instructions of the manufacturers. Sensitivity tests were performed using the single disc diffusion test against the following antibiotics: Ampicillin (10 ug), cotrimoxazole (25 ug), tetracycline (30 ug), chloramphenicol (30 ug), gentamicin (10 ug), penicillin G (10 ug) and erythromycin (15 ug). Results were read after 24 hours and interpreted according to zones sizes, using Staphylococcus aureus and Escherichia coli susceptible to all antibiotics as reference strains. The predominant bacteria isolated from the lesions were S.aureus, S. faecalis, and Klebsiella spp. Most isolates were sensitive to erythromycin, cloxallin, cotrimoxazole and gentamycin and resistant to ampicillin, tetracycline and penicillin G.
We are recommending the use of erythromycin, cloxacillin and codimoxazole for blind treatment of pyogenic oro-facial infections and a continuous monitoring of the antibiotic susceptibility patterns for effective treatment of oro-facial infections and a continuous monitoring of the antibiotic susceptibility patterns for effective treatment.

19 WATER DEFLUORIDATION AS A STRATEGY TO CONTROL DENTAL FLUOROSIS: A REVIEW: C.M. RWENYONYI*, Institute of Dental Research, Faculty of Dentistry, University of Bergen, Årstadveien 17, N-5009 BERGEN, Norway.

Prevalence of dental fluorosis has been fairly well studied, and it is apparent that dental fluorosis is practically found in every country in the world. The aim of this paper, is to review the correlation between the endemicity of dental fluorosis and fluoride concentration in drinking water (water being the major source of ingested fluoride). Then, highlight studies done in the control of dental fluorosis in some endemic areas by water defluoridation. Several methods both at communal and individual home units employing either ion adsorption, exchange or both have been investigated. However, little success in their application has been realized. The major drawbacks include high costs, inconveniences in regular monitoring of fluoride concentration the processed water, and the unpalatability of the potable water. Therefore further work is required leading to better quality potable water at an affordable cost.

20 DENTAL FLUOROSIS: A REVIEW OF LITERATURE WITH COMMENTS ON ITS RELATIONSHIP WITH NUTRITION, NUTRITIONAL STATUS AND CULTURAL BEHAVIOUR: A.K. AWADIA*, K. Bjorvatn (DDS, Ph.D) Institute of Dental Research, Faculty of Dentistry, University of Bergen, Bergen Norway.

A comprehensive review of literature on dental fluorosis with comments on its relationship with nutrition (diet), nutritional status, body's physiology and cultural behaviour is presented. Recent reports have shown an increase in the prevalence of dental fluorosis both in low and high fluoride containing water communities. Also, there has been variation in the severity and prevalence of dental fluorosis in individuals living in the same area and with as common sources of water. These variations have traditionally been explained by variations in the fluoride intake, but other factors, such as climatic factors (mean annual temperature) as well as nutritional and cultural habits have been brought up. It is concluded that more research is needed to explain the differences observed in the development of dental fluorosis.

21 THE FEASIBILITY OF MILK FLUORIDATION IN COMMUNITY PREVENTIVE PROGRAMMES - A PRACTICAL EXAMPLE FROM AN AREA OF PERU: N. H. WHITEHOUSE*, Dental School, University of Wales College of Medicine, Ysgol Deintyddol, Coleg Meddygaeth Prifysgol Cymru.

The beneficial effect of fluoridated milk on the prevalence of dental caries is well documented and it is generally accepted that reductions of 20-25% are achievable through community based preventive programmes. However, it is generally assumed that the technical and logistic support that is necessary is such that milk fluoridation is not a viable option. This paper describes how to conduct a feasibility study to assess the use of the technique in a given country or district. It is based on a practical exercise that has just been completed in two regions in Peru, a country that shares many of the problems of East & Southern Africa. Therefore it is possible to assess the feasibility of milk fluoridation.

22 ALTITUDE, DIET AND DENTAL FLUOROSIS: A STUDY IN TANZANIA: L.MABELYA* K.M. Yoder**, V. Robison***. Department of Preventive and Community Dentistry, University of Dar es Salaam, ** Oral Health Research Institute, Indiana University, U.S.A. ***Tyler, Texas.U.S.A.

In February 1996, 284 Tanzanian children in three locations, at different altitudes (100,840 and 1430 meters), were examined for caries and dental fluorosis. They were interviewed about their food habits and use of cooking additive "magadi". Water, food, urine and magadi samples supplied by the participants were analyzed for fluoride content.

Water F-content at 100 and 1430 meters was low (≤ 1ppm). Water F-content at 840 meters was high (X 5.72 ppm). As expected, mean TFI Fluorosis scores at the mid-altitude and high F- area were high. The mean of the maximum scores was 6.7. The fluorosis scores of the two sites with negligible water F- differed dramatically; the 100 meter site had a mean maximum score of 0.06 while the 1430 meter site had a mean maximum TFI score of 6.96. Assuming that food habits have not changed drastically since the children's amelogenesis, and urine samples were analyzed. Mean food F-values were 0.49, 2.47 and 2.14 ppm respectively. mean urine F- values were 0.52, 4.43 and 1.43 ppm respectively.
Severity of fluorosis at the 1,430 meters site was not consistent with the low F-concentration in drinking water, and was more severe than what would be expected with the moderate urine F-values which were found.