

**A modified complete denture technique, A.P. Dias\* (Prince Philip Dental Hospital, The University of Hong Kong, Hong Kong).** **15**

Prosthetic rehabilitation with a set of complete dentures usually requires six to seven clinical sessions. This poses problems for a group of patients who, for one reason or another, find it almost impossible to make such frequent visits as those denied oral health care. However, the number of appointments could be reduced to three if a modified complete denture technique is adopted. This technique consists of only three clinical sessions: the first for examination, diagnosis, treatment planning, preliminary and working impressions and maxillo-mandibular records; the second for try-in and protrusive record and the final session for the issue. Although the first clinical session is rather long, this technique has enabled patients who would have been denied complete denture service due to the impracticality of making frequent visits, the opportunity to avail themselves of this service.

**Appropriate Restorative Technique (ART) to combat caries in developing countries OSMAN Y.I. University of the Western Cape, Cape Town.** **16**

Dental caries in developing countries is widespread and affects millions of people. Restoration of these carious teeth with conventional restoration is not necessarily the correct strategy due to (1) a lack of human and financial resources and (2) the high failure rate (52%-61%) associated with conventional restorations. The high failure rate has been linked amongst other factors to the presence of residual decay under the restoration and/or to the microleakage that occurs at the tooth-restoration interface. Pivotal to the appropriate restorative technique (ART) philosophy is the removal of all infected dentine and the sealing of the lesion with a glass ionomer cement. This study evaluated in vitro microleakage around Fuji IX restorations sealed with a sealant. 30 Caries extracted teeth were restored by pre-clinical dental students using Fuji IX with a sealant. The restored teeth were thermo-cycled between 5°C and 55°C for 500 cycles and then placed in a basic fuchsin solution for 24 hours. The results showed no microleakage at the tooth-restoration interface of the teeth restored with Fuji IX a sealant.

Based on these results this study recommends the utilization of:

1. the micro-cavity preparation
2. a caries-cavity to ensure optimal removal of all infected dentine
3. a glass-ionomer (Fuji IX) restoration sealed with a sealant.

This philosophy will result in an appropriate resistant to microleakage and which will act as a deterrent to recurrent caries due to its continuing fluoride release.

**One and 2 Year Results of ART Procedures in Zimbabwe. J.E. FRECKEN, F. HAKONI, M.D. SITSOLE, Ministry of Health & Child Welfare, Dental Department, Zimbabwe.** **17**

ART stands for Atraumatic Restorative Treatment and is a treatment procedure based on manually cleaning cavities and filling them with a glass ionomer. Electricity is not required. It follows the concept of minimal intervention and can be applied in clinics and in places where traditional dental care cannot be used. Glass ionomer is also used for sealing pits and fissures.

ART is used in a school oral health programme in Zimbabwe since 1993. During the first year, Chemfil Superior was used as the filling/sealing material whilst Fuji IX was used in 1994. One and 2 year results for one surface ART restorations using Chemfil showed a cumulative survival figure of 91.4% and 89.2% respectively. After 2 years, only one of the 84 restorations was evaluated a failure because of the presence of caries. Glass ionomer sealants had been placed in active/inactive early enamel lesions. Caries was present in 0.8% and 3.8% of the surfaces sealed after 1 and 2 years, respectively.

The 1 year survival figure for one-surface ART restorations using Fuji IX was 97.9. Caries was absent alongside the restorations. After 1 year, 2.9% of the surface sealed with Fuji IX glass ionomer showed signs of caries. It is concluded that ART makes restorative dental care more available to larger groups in the population.

Supported by Lever Brothers LTD Zimbabwe; WHO Collaborating Centre

**Cysts of the Oral Region - A Study of 348 Cases. Prof. A.J. LIOETHLM\* and T.J.P. SMART, University of Pretoria, South Africa.** **18**

Cysts of the oral region are lesions that occur frequently. They have been numerous publications regarding the pathogenesis, diagnosis, behaviour and treatment of the different types of cysts. However, reports on the relative incidence of the cysts are limited.

The clinicopathological data of all cysts diagnosed in the Department of Oral Pathology and Oral Biology, University of Pretoria, during the period 1984 to 1991 were reviewed and classified according to the WHO (1982) criteria. Of a total number of 348 cysts, 203 (58%) were odontogenic and 145 (42%) non-odontogenic cysts. The odontogenic cysts included 87 (43%) developmental and 116 (57%) inflammatory cysts. The developmental odontogenic cysts included 45 odontogenic keratocysts, 34 dentigerous cysts, 3 lateral periodontal cysts, 3 paradentogenic cysts, 1 gingival cyst of the child, 1 gingival of the adult and 1 calcifying odontogenic cyst. The most frequently observed non-odontogenic cyst was nasopalatine cyst (22%). Mucous cysts comprised 31% of the total number of cysts, while 2 cases of cystic hygroma were diagnosed.

The small number of published studies regarding the relative incidence of cysts of the oral region were done with use of the outdated WHO (1972) criteria. There is a need for retrospective studies on this subject with use of the WHO (1982) criteria as it could reflect important regional differences.

**Viral lesions of the oral mucosa Prof. W.P. DREYER (Faculty of Dentistry, University of Stellenbosch, South Africa).** **19**

Viral lesions of the oral mucosa can be clinically classified into vesicular, exophytic and haemorrhagic lesions. In this illustrated presentation the former two groups are reviewed in respect of their epidemiology in an African context, as well as their more common clinical presentation. Vesicular lesions are caused by Herpes and Coxsackie groups of virus. The Herpes family comprises about 50 species that affect more than 30 animal species. Man is the host and exclusive reservoir of our members of this group i.e. herpes simplex viruses types 1 and 2, varicella-zoster virus, cytomegalovirus and Epstein-Barr virus. They tend to target suprabasilar epithelial cells which undergo lysis to form intra-epithelial vesicles which in turn break down to form clusters of shallow ulcers. On resolution some viruses may remain latent within the tissues and later become reactivated by trigger factors, and some may be involved in neoplastic transformation. Human papilloma-viruses are responsible for exophytic epithelial lesions. The oral mucosa is a common site for verruca vulgaris and the exclusive site for focal epithelial hyperplasia (FEH). The latter shows a geographic and ethnic distribution favouring the lower socio-economic strata. It has been shown in certain African populations. The lesions are histologically specific and generally self-limiting. Due to sparse data for Africa, it is suggested that viral lesions of the oral mucosa form a topic for collaborative research on the continent.

**Diagnosis of periodontal disease - recent advances Prof. W.P. DREYER (Faculty of Dentistry, University of Stellenbosch, South Africa)** **20**

Probing and radiological assessment are traditional diagnostic procedures for periodontal diseases. These techniques measure attachment loss and thus supply information on previous disease experience but not on site-specific activity nor possible future attachment loss. Recent technological advances such as automatic pressure controlled probes, subtraction radiography, computer aided imaging and chair side assays for host and bacterial markers of site specific disease may have the potential to improve periodontal diagnostic acumen. Such technological advances may increase cost and could have limitations in public oral health care where finances are limited. In this illustrated presentation the clinical value, sensitivity, specificity and predictive potential of such diagnostic techniques are compared with the standard clinical procedures of probing using Community Periodontal Index of Treatment Needs (CPITN) and non-standard bite wings. It is suggested that the CPITN and bite wing radiography give sufficient diagnostic information in a clinical setting but that the use of automatic probes and subtraction radiography is more sensitive and reliable in longitudinal studies on attachment loss. Although chairside assays for host and bacterial markers show clinical promise, they need further investigation before they can be recommended for general use.

**INFECTIONS OF THE FACE NOT ASSOCIATED WITH DENTAL CAUSE: COLLINS PHIRI\* - KCH, LILONGWE** **21**

There has been a sharp increase in the number of patients with soft tissue infection at the maxillary and mandibular facial region: intracanal fossa, nasosteric space, pterygomandibular space, lateral pharyngeal space, retropharyngeal space and sublingual space, reporting at Kamuzu Central Hospital. These infections did not have obvious dental cause. It was felt necessary that a study be carried out.

Radiographic examination was carried out and patients tested for HIV.

One of the early dominant manifestation of immuno-suppressed patient is acute infection at the face and neck.

**A Cost-Effectiveness Study of Part-Time District Dentists in the Western Cape, South Africa, R. Lallo, Faculty of Dentistry and WHO Collaborating Centre, Private Bag X08, Mitchells Plain, 7785** **22**

The issue of cost-effectiveness in health care delivery is of paramount importance in this era of economic recession and construction and development. The Oral Health Directorate of the Cape Provincial Administration employs part-time district dentists to render services to communities in the rural areas of the province. The aim of this study was to assess the cost-effectiveness of this system. The service output and value of services rendered of part-time district dentists was compared to a similar number of full-time salaried dentists. The results show that both district and salaried dentists provided an almost exclusively paid relief services. Preventive and promotive care comprised a small percentage of the services provided. The cost-effectiveness component of the study shows that the cost per Relative Value Unit (RVU) in the district dentists system is R11.67 and in the salaried system it was R10.55. There was almost no difference in the cost per RVU. The district dentists were remunerated at an average of 48% of the fee-per-act rate and salaried dentists at about 43%. This analysis suggests that salaried dentists are more cost-effective than district dentists. A number of confounding factors must be considered such as the ceiling placed on the income of district dentists and the non-monetary activities carried out by salaried dentists. The possibility of a capitation remuneration system needs to be investigated. The remuneration system chosen for part-time district dentists must be easy to administer, not be open to abuse, encourage promotive and preventive care and be cheaper than establishing a full-time public health clinic. (41 - 23.65)