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<th>Title</th>
<th>Design of a self-contained apparatus for air turbine handpiece testing</th>
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<td>Author(s)</td>
<td>Darvell, BW; Dyson, JE</td>
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<tr>
<td>Citation</td>
<td>The 13th Annual Scientific Meeting of the International Association for Dental Research (Southeast Asian Division), Kuala Lumpur, Malaysia, 1-3 October 1998. In Journal of Dental Research, 1999, v. 78 n. 5, p. 1174, abstract no. 38</td>
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<tr>
<td>Issued Date</td>
<td>1999</td>
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<tr>
<td>URL</td>
<td><a href="http://hdl.handle.net/10722/53643">http://hdl.handle.net/10722/53643</a></td>
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Divisional Abstracts: Southeast Asian Division

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In vivo Evaluation of Cheeses Using Intra-Oral Caries Testing
K.J. TOMBIA* and M.E.J. CURZON (Department of Paediatric Dentistry, Leeds Dental Institute, Leeds, UK)

Cheeses are frequently recommended as snack foods which are safe for teeth. The aim of this study was to investigate the degree of cariogenicity of these snacks by testing different cheese samples for the presence of bacteria that cause dental caries. The study involved 150 children aged 8-12 years who were divided into three groups: (a) children who consumed cheese as a snack, (b) children who did not consume cheese as a snack, and (c) children who consumed cheese as part of their regular diet. The children were followed for 12 months, and the presence of caries was assessed using the dmft index. The results showed that children who consumed cheese as a snack had a significantly higher dmft index compared to those who did not consume cheese as a snack. The study also found that cheese consumption was associated with an increased risk of dental caries in children.

34
The pattern of caries attack and implications for caries control in 16-year-old schoolchildren: R. ABUGASSI*, N. JAASRAF* (Ministry of Health Perlis, Malaysia) and J. ŁÓSKI* (Faculty of Community Dentistry, University of Malaya, Perak)

Most national surveys of dental caries report the prevalence and mean experience using the DMFT and DMFS index. However, these indices do not monitor the changing patterns of caries attack when overall caries start to decline. Consequently, the impact of restorative practices to reduce the DMFT cannot be estimated. The aim of this study was to (1) determine the pattern of experience using the DMFT index and (2) to identify the predominant pattern of caries attack with a view to find the best restorative solution for patients.

The sample consists of 648, 16-year-old Malay schoolchildren in Perak, taken from 5 randomly selected schools. Two schools were urban and 3 were rural. Clinical examination for caries using DMFT and the percentage of caries attacked for each area of the mouth was performed. The mean DMFT was 3.45 (sd 3.04) and DMFS 5.14 (sd 5.55). This may be considered low for a 16-year-old group. However, 12.8% were caries-free. Almost all restorative treatment needs had been met (96%). The greatest contributor to the DMFT index was from the F component (92%). A higher percentage of the majority of the caries were concentrated on molar teeth (77.2%). More than two-thirds of the children (67.5%) had a history of previous treatment. Most of the restorations (87.0%) were simple (one surface restorations). The most common material used for restorations was amalgam (86.1%).

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Dental implant service in Hong Kong — demand and supply
T.T. SHE* E.C.M. LO (Faculty of Dentistry, The University of Hong Kong)

Dental implant has been shown to be successful and has become an important treatment in the replacement of missing teeth. However, no information on the provision of dental implant service in Hong Kong was available. The objectives of this study were to describe the prevalence of dental implant treatment among Hong Kong adults, to find out factors which influence treatment received by dentists, and to compare the characteristics of dentists who provided this treatment with those who did not. This study consisted of a mailed questionnaire survey of 160 randomly selected dentists in Hong Kong and a home survey of adult patients. The study was conducted at three points in time, with responses being returned by dentists and 314 adults were invited. Only 16% of the interviewees had heard of dental implant though the percentage was higher in the younger age group. The most common reason for patients who were ever received dental implant was molar implant. Most respondents had received some form of dental implant treatment but the treatment varied a lot. One-quarter of them had provided some form of implant treatment to their patients. Proportionally more dentists who provided dental implant treatment had received training involving real patients than dentists who did not. In conclusion, the prevalence of dental implant treatment among Hong Kong adults was very low. Yet a significant percentage of Hong Kong dentists had provided or potentially could provide this treatment.

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Denture Quality and Patient Satisfaction in Elderly Chinese in Hong Kong
H.C. SHIU* and J.Y. DENTON (Oral Rehabilitation, Faculty of Dentistry, HKU)

Relatively little information is available on the oral status and wearing habits of the elderly (+65 years old) population in Hong Kong.

The aim of the present study was to investigate the relationships between denture quality, denture wearing habits and patient satisfaction, and to provide information for the improvement of oral health care in this group of elderly people.

216 elderly individuals (144 male, 147 female age 65-96) who possessed one or more complete or partial dentures were included in the study. 81 of these were residents of one of three homes for the aged. 78 were at rest homes and the other 5 were at their homes. The study was conducted at the Reception and Primary Care Unit of the Prince Philip Dental Hospital, Hong Kong.

Participants were questioned about their dentures and the periods for which the dentures were worn. Using criteria adapted from previous authors (Rae 1978, Magnusson 1986, Vigild 1987) the dentures were examined with respect to their construction, stability, retention, occlusal relationships, surface wear and presence of other defects.

Overall, 37% were edentulous in both jaws, and a further 24% were edentulous in one or other jaw. The remaining 39% had some teeth in both jaws.

Although most patients (92%) expressed no complaint about their dentures, many of these had relatively serious defects, particularly with respect to retention. Taking the groups overall, patient satisfaction did not appear to be associated with the variables related to treatment. However, when patient gender and age of the dentures were considered some significant relationships were found.

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The Profile of Partial Denture Patients Attending an Academic Institution.
S.B. KENG* and P.L.L. Loo (Faculty of Dentistry, National University of Singapore)

Patients who exhibit partial edentulism require the replacement of lost teeth to restore oral function and appearance. The type of patients seen together with the clinical conditions they present will provide useful information to assist prostodontic treatment planning. The aim of this study was to obtain information as regards to the presenting clinical conditions in the mouth together with the status of prosthesis in use. 310 clinical hospital denture patient records were randomly selected for the study. The data collected were from the patients who attended the University of Malaya, Singapore. The following related information were gathered and extracted for the study: 1) Patient: face form, reasons for treatment, reasons for loss of prosthesis, prosthesis hygiene; 2) DM and DPO findings; 3) Periodontal status; 4) Clinical Condition: occlusal classification, alveolar ridge, abutment teeth status, reasons for tooth extraction; 5) CHB; 6) DM findings; 7) PNS status; 8) DM and DPO findings; 9) PNS status; and 10) CHB. Descriptive analysis was performed with respect to the above categories. The data was compiled and analyzed with the use of a questionnaire survey. The results show that the most common reasons for the loss of prosthesis were due to the failure of the prosthesis. More than 50% of patients complained of poor retention of their present denture while 47% did not. Of the patients who had worn prosthesis for more than 5 years, 85% reported discomfort and change in their overall appearance. In the periodontal classification, 67% of the patients had periodontal disease. One study concluded that the presence of periodontal disease is associated with worse oral hygiene. Further study is needed to confirm this conclusion. The results also revealed that the patients were generally satisfied with their current prosthesis and that the majority of them would prefer to retain their current prosthesis. However, the patients were also aware of the potential benefits of having a new prosthesis and were interested in the possibility of obtaining a better fit or a more aesthetic prosthesis. The study showed that patients attending institutional clinics came to replace dentures more for functional reasons and their aesthetic expectations were not high. The results also showed that patients who had previously experienced poor conditions were not optimal and needed attention before commencement of prostodontic treatment.

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Design of a Self-contained Apparatus for Air Turbine Handpiece Testing. D.N. DARWELL and J.E. DYSON* (Dental Materials Science and Oral Rehabilitation, Faculty of Dentistry, the University of Hong Kong, Hong Kong)

The longevity of dental air turbine handpiece bearings has been of concern for a long time, but with routine oiling and greasing the normal life of such bearings is much longer. A systematic evaluation of the performance of dental air turbine handpieces has been undertaken by Dyson & Darwell (1997). The measurement of these, however, required special procedures involving an elaborate and expensive system. This approach, as such, would not be applicable in the dental surgery. It is the present purpose to describe the design and implementation of a self-contained apparatus for the monitoring of handpiece bearings. The apparatus uses a combination of mechanical, electrical and electronic components to provide an accurate and practical way of measuring the performance of handpieces. The apparatus is simple to use and can be easily incorporated into the routine practice through the application of the procedure in a real service. The equipment will have a variety of other applications in standards compliance testing, design development, and maintenance checks.

This work was supported by The University of Hong Kong CRCG grant nos. 335.250.0001 and 337.255.0002.

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The Discharge of Lubricant from Dental Air Turbine Handpieces. S.M. PONG* and J.Y. DYSON (Oral Rehabilitation, Faculty of Dentistry, HKU).

Using a new well recognized in standard test, lubricant discharged from dental equipment during routine procedures may contaminate the field of operation and compromise the results of bonding techniques. The aim of the present study was to report on the discharge of lubricant from dental air turbine handpieces and to discuss its clinical significance in this context.

Discharge of lubricant E: In order to determine the amount of lubricant discharged from dental handpieces, the author conducted an experiment in the laboratory. The lubricants used were oil-free and oil-containing lubricants. The lubricants were loaded into the handpiece and discharged for 30 seconds at 600 psi. The lubricant discharged by the handpiece was collected in a vial. The discharge was measured by weighing the vial before and after the experiment. The results showed that the lubricant discharged by the handpiece was minimal. However, further studies are needed to determine the amount of lubricant discharged by the handpiece over the entire test period.

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DENTAL PATIENTS' RIGHTS IN HONG KONG
C.W.T. LAM, F.N.F. LEE, M.C.M. WONG, J.K.S. LIU (THE UNIVERSITY OF HONG KONG)

In Hong Kong, patients' rights and responsibilities became more concerned in recent years. Different Authorities have proposed their patients' charters which were mainly related to the medical services. However, no related charter or guidelines has been made in dentistry. This research aimed to study the knowledge of the public on patients' rights and the extent of the public in exercising their rights in dental services. A telephone survey was conducted with a structured questionnaire on Hong Kong Chinese aged 25-49 with dental experience. A total of 1626 calls were made, of which 408 were eligible and 401 questionnaires were completed. Results showed that 75% of the respondents knew at least 10 out of 14 rights. However, 65% of the respondents had no knowledge about all the more the respondent knew about his/her rights, the more he/she exercised them. The rating was the number of rights that the respondent had exercised, divided by the total number of rights exercised and then multiplied by 1/3. A significant positive association was found between education level and the knowledge of patients' rights. Regulatory work can be operated simply and conveinently. Most Females were experienced in exercising more rights than males. The commonest reasons for not exercising the specific rights were "the dentist and "dentist has done". In conclusion, it was found that the Hong Kong public knowledge of patients' rights was acceptable. Further reinforcement in educating the public about the rights of accessing one's own medical information, to receive quality dental care such as treatments with adequate pain control and to be informed of the alternative treatment options was necessary. Approximately one third of the patients, rights the public known has been exercised. This proportion was relatively constant no matter how many rights the respondents knew.

This work was supported by The University of Hong Kong CRCG grant nos. 335.250.0001 and 337.255.0002.