Abstracts on this page have been chosen and edited by Dr Trevor Watts

Oral oncology

Lip cancer in Northern Finland: changing incidence and clinical characteristics

Alho O-P, Keränen M-R et al.
J Oral Pathol Med 2000; 29: 299-312

As in other European countries, lip cancer has decreased in males.

In 35 municipalities of Northern Finland, with a population of around 300,000, 96 cases of lip cancer were diagnosed from 1983–1997. The overall age-standardized incidence rates per 100,000 were 2.9 for men, and 0.42 for women. Incidence rates increased greatly from age 55 yrs in men, and from 65 in women.

From 1983–7, male incidence rates decreased from 4.8 to 2.7 in 1988–92, and to 1.4 in 1993–7. Corresponding rates in women were 0.3, 0.54 and 0.36, which the authors considered an overall increase. Known risk factors were present for 90% of patients: rural domicile for 68%, outdoor occupation for 69%, cigarette smoking for 53% and pipe smoking for 7%.

All tumours were squamous cell carcinomata, almost all were on the lower lip, and in 16% of cases had spread to regional nodes but no further. The authors suggest possible reasons for the reduction in male tumour incidence, including decreased exposure to sunlight and smoking.

Conservative dental surgery

A randomized 5-year clinical evaluation of 3 ceramic inlay systems

Molin MK, Karlsson SL
Int J Prosthodont 2000; 13: 194-200

When compared with gold inlays, 92% of ceramic inlays were considered satisfactory at 5 years.

In each of 20 patients requiring replacement of 4 Class II restorations in posterior mandibular teeth, a gold inlay and 3 different ceramic inlays were inserted in random order. Ceramic inlays were produced in 3 ways: computer-aided design and manufacture, conventional porcelain technique, and high pressure glass-ceramic casting. Inlays and enamel were acid-etched before luting.

Quality of the inlays was assessed with the California Dental Association system. Colour mismatch increased from 15–25% (baseline) to 30–50% (5 yrs) in the different ceramic systems. Surface roughness affected 30% of gold inlays throughout, while in ceramics it increased from 0 to 25%. Anatomical form was less than ideal in around 20% of inlays, with contour and ridge variations; marginal ditching was present in 20% of gold inlays throughout, and by 5 yrs, in 45–70% of ceramic inlays. By 5 yrs, 5 ceramic inlays had fractured, but patient satisfaction was high. The fractures appeared in patients with greater occlusal wear, but the authors did not consider this to be the only contributory factor.

Cariology

Changes in dental caries prevalence in 12-year-old students in the State of Mexico after 9 years of salt fluoridation

Irigoyen ME, Sánchez-Hinojosa G
Caries Research 2000; 34: 303-307

Caries declined but it is not certain whether this was due to salt fluoridation or other factors.

Salt has been used as a vehicle for fluoride in several countries and this preparation has been shown to reduce caries. In 1988, the State of Mexico (population 11m) was the first state in that country to implement such a programme. A random sample of 2,275 12-year-olds was examined in 1988, and in 1997, 1,138 were chosen for comparison.

In 1988, the DMFT in females was 4.81, reducing to 2.66 in 1997; for males the respective figures were 3.92 and 2.19. Respective DMFS scores were: 7.57 and 4.05; 6.19 and 3.5. In 1988, 10.3% of 12-year-olds were caries-free, rising to 27.7% in 1997. In both surveys, pit and fissure caries accounted for 90% of lesions, and first molars accounted for 2/3 of DMFT in 1988, rising to 3/4 in 1997.

Without a suitable control group, the authors were unable to ascribe the caries reduction to salt fluoridation, and state, for instance, that fluoride dentifrice production increased by more than 1/3 from 1991 to 1998. They state, however, that the reductions were similar to those observed in other countries with similar salt fluoridation programmes.

Implant dentistry

Long-term marginal periimplant bone loss in edentulous patients

Carlsson GE, Lindqvist LW et al.
Int J Prosthodont 2000; 13: 295-302

Patients with fixed implant prostheses in both jaws had similar minimal bone loss to those with fixed mandibular implant prostheses opposed by complete dentures.

This study aimed to examine bone loss around implants supporting fixed prostheses, in relation to the nature of the opposing prosthesis. In 47 patients aged < 65yrs, mandibular implant-supported prostheses were placed (6 or 5 implants each) and followed up, in 44 patients for a full 15 yrs. After a mean 4.5 yrs, 13 patients also received a similar maxillary prosthesis which then was followed for the full period. The remaining 34 patients wore a maxillary complete denture for their whole follow-up.

In the mandible,1% of implants were lost, and in the maxilla, 7%; this was before prostheses were placed, except for one mandibular implant lost after 6 yrs. Around 0.5 mm peri-implant bone loss occurred in the first year, but subsequently it reduced to less than 10% of this. In the 13 patients with two prostheses, bone loss in the two jaws was similar and correlated ($r = 0.55$). The patients wearing maxillary complete dentures throughout had similar mandibular peri-implant bone loss to the patients wearing implant-supported prostheses in both jaws.