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CONSERVATIVE DENTAL SURGERY

Six-year success rates of occlusal amalgam and glass-ionomer restorations placed using minimal intervention approaches

Mandari GJ, Frencken JE *et al.* *Caries Res* 2003; **37**: 246-253

Atraumatic restorative treatment (ART) compared well with conventional restorative techniques.

Dentinal occlusal caries was treated in a total of 430 teeth, with random allocation of 3 restorative techniques. Conventional treatment was provided for 139 teeth in 50 subjects in a university clinic, using rotary and hand instruments (C group); modified treatment was given to 135 teeth in 49 subjects using portable equipment with similar techniques (M); and ART with use of a caries-removal solution was provided for 156 teeth in 53 subjects (A). Amalgam and glass-ionomer restorations were provided randomly on the two sides of each mouth. All treatment was given by one dental therapist.

After 6 years, 20% of subjects had dropped out, with significantly more of these in C and M groups than A. Just over 1/4 each of both amalgam and glass-ionomer restorations were unsatisfactory, and between 1/4 and 1/3 of the 3 techniques of treatment. The differences between treatments and between techniques were not significant. The commonest causes of failure were given as: restoration fracture/marginal defects and loss of material. Secondary caries was significantly commoner with amalgam than with glass-ionomer restorations (10% v 2%).

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ONCOLOGY

Impact of whole body positron emission tomography on initial staging and therapy in patients with squamous cell carcinoma of the oral cavity

Goerres GW, Schmid DT *et al.* *Oral Oncol* 2003; **39**: 547-551

Positron emission tomography (PET) provided useful confirmatory evidence and in 15% of cases led to a change in management.

PET scanning is used for identifying head and neck tumours, and their nodal and distant metastases. In this study, records were analysed from 34 patients (mean age 71 yrs, range 59-81) with a new diagnosis of primary oral squamous cell carcinoma. Clinical nodal involvement was identified in 21, and none had clinical or radiological evidence of distant metastases or synchronous primary tumours. Subsequently, patients were imaged with PET scanning, using fluorodeoxyglucose.

Following evaluation of PET scanning by two experienced clinicians, the primary tumour was evident in 33 of the 34 patients. In 27 patients clinical nodal results were confirmed, but in 7 patients, PET with computed tomography (CT) identified additional nodal pathological change, and in 8 patients, distant lesions were identified, 3 of which were found to be metastases, and 4 of

which were synchronous primary tumours. Treatment was altered in 5 patients on account of PET and PET/CT data.

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IMPLANT DENTISTRY

Long-term implant prognosis in patients with and without a history of chronic periodontitis: a 10-year prospective cohort study of the ITI dental implant system

Karoussis IK, Salvi GE *et al.* *Clin Oral Impl Res* 2003; **14**: 329-339

Implant survival was lower in patients with implants replacing teeth lost on account of periodontitis.

In this study, a comparison was made between 8 patients with a history of chronic periodontitis who had received 21 ITI hollow screw implants (P group), and 45 patients with no such history who had received 91 implants (C). In the C group, implants had been used to replace teeth lost for reasons such as caries, trauma or anodontia.

Survival rates showed a trend towards a difference, but this did not reach significance. The P group had a 9.5% failure rate after 10 years, compared with 3.5% for C. When probing depth ≤ 5 mm without BOP was set as criterion for success, respective survival rates for the two groups were 52% and 79% ($P < 0.025$).

However, when smoking was taken into account, 10 year survival was significantly lower for implants placed in those smokers with a history of periodontitis (80%) than for those without (100%). There was also a significantly higher complication rate (40% v. 6%).

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ORAL MEDICINE; ONCOLOGY

Proliferative verrucous leukoplakia: high incidence of gingival squamous cell carcinoma

Bagan JV, Jimenez Y *et al.* *J Oral Pathol Med* 2003; **32**: 379-382

Proliferative verrucous leukoplakia (PVL) was associated particularly with gingival development of squamous cell carcinoma (SCC).

PVL starts as a hyperkeratosis and tends to spread and become multifocal. In a Spanish hospital, 30 PVL patients of mean age 71 yrs were followed up 6 monthly for 1-10 yrs after treatment (mean 4.7). Any lesion suggestive of SCC was biopsied. A comparison was made with a group of 110 patients with oral SCC but no PVL.

All PVL patients had multifocal leukoplakia, in 4/5 it was exophytic, and in 2/3 erythroplakia was present. Only 1/4 were smokers. In 8 patients verrucous carcinoma developed, and in 19, oral SCC. PVL patients were less likely to be smokers (21% v. 71%) and had more gingival SCC (74%) than the non-PVL group, where the tongue was the commonest site (38%).

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