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Conservative dentistry

Restorations with extensive dentin/enamel-bonded ceramic coverage. A 5-year follow-up

Van Dijken JWV, Hasselrot L et al.
Eur J Oral Sci 2001; 109: 222-229

The 5 year success rate was well over 90%.

In 110 patients, 182 ceramic restorations were placed with partial or complete coverage in 40 premolars and 142 molars. Most (109) were with full coverage, 17 were in endodontically treated teeth with no post or core, and the remainder were partial coverage restorations. Follow-up was annually for a mean 4.9 yrs (range 4.3-7.5), and there were no drop-outs.

Causes of restoration failure were: 5 fractures, 4 lost, 3 having recurrent caries, and one requiring endodontic treatment. Luting with chemical-cured and luting with dual-cured composite resins gave respective success rates of 92% and 97%. There were no differences between the 3 dentine-bonding systems used. Molars and premolars had similar failure rates.

The authors conclude that their results show a reduced need for traditional full-coverage restorations with extensive loss of tooth substance. They see further advantages of the tested systems in reducing the need for endodontic treatment or deep cervical margin placement for traditional retention.

Epidemiology; oral surgery

Reasons for extraction by dental practitioners in England and Wales: a comparison with 1986 and variations between regions

Agerholm D
J Dent 2001; 29: 237-241

There are fewer extractions now and they are later in life.

A random sample of 1,400 dentists working within the NHS was asked to participate in a 4-week study in 1997 recording reasons for all their tooth extractions. Eventually, a total of 546 fully participated, of whom 17 extracted no teeth during the study period. Reasons were recorded for 11,194 teeth extracted in 7,693 patients.

In 1986 dentists had extracted a mean of 24 teeth each in a similar period, and in 1997, this reduced to 20.5 each. In patients up to 20 yrs old, orthodontics accounted for 74% of extractions in 1986, and 81% in 1997. After excluding orthodontic reasons, caries accounted for most extractions up to age 50, and after that age, caries and periodontitis accounted for similar proportions.

Peak ages for caries extractions were 21-30 in 1986 (23% of all carious teeth extracted) and 31-40 in 1997 (19%); for periodontitis, peak ages were 51-60 in both surveys (28-29%). The author comments that the reduction in tooth loss has increased treatment need for older people.

Periodontics

Adjunctive treatment with subantimicrobial doses of doxycycline: effects on gingival fluid collagenase activity and attachment loss in adult periodontitis

Golub LM, McNamara TF et al.
J Clin Periodontol 2001; 28: 146-156

Over a 9 month period, low doses of this tetracycline appeared to maintain attachment levels, but other groups had a surprisingly high rate of attachment loss.

Tetracyclines are protease inhibitors as well as antibiotics, with effects on human tissues. In this study, 75 patients were randomized to low doses of doxycycline or placebo in a 3-part double-blind trial lasting 36 weeks. In the first 12 weeks, 4 regimes of doxycycline were compared with placebo, no treatment was given in the second 12 weeks, and finally 20mg doxycycline *qid* was compared with placebo. Subjects were scaled before each comparison, but no OHI was given; 66 completed the first part of the trial, and 51 the third part.

In the first part, there were no significant differences between any of the 5 groups in crevicular fluid (GCF) collagenase activity, though all active groups showed some significant reductions from baseline. Probing attachment level (PAL) gained a mean 0.3mm in the main doxycycline groups at 12 weeks compared with baseline, but there was no significant difference between groups. At 36 weeks, all groups had reduced GCF collagenase activity, but mean PAL deteriorated by 0.15mm in the group with the highest doxycycline regime: this was significantly better than the other groups which lost 0.8mm. However, 0.8mm in 36wks is nearly 4 times as high as known rates of attachment loss from epidemiological studies of periodontitis (0.2-0.3mm/yr) in the absence of plaque control.

Oral medicine

Herpetic gingivostomatitis in otherwise healthy adolescents and young adults

Holbrook WP, Gudmundsson GT et al.
Acta Odontol Scand 2001; 59: 113-115

Initial infection was at an older age than expected, and was sometimes more severe than in young children

Over a 3 year period, 60 patients with symptoms suggestive of oral herpes simplex infection (HSV) were seen in an Icelandic oral medicine clinic. Primary HSV-1 was diagnosed in 38, recurrent HSV in 18, enterovirus (perhaps hand, foot and mouth) in 2 and no virus in 2. No patients were known to be immunocompromised. Most subjects in the 16-25 age group were severely affected by the infection.

Only 11 subjects with primary HSV were in the first decade of life, another 11 in the second, 14 in the third and 2 in the fourth. The authors consider that primary HSV-1 infection after childhood is unexpected, but may relate to reduced childhood exposure coupled with more intimate contact such as kissing in unrelated older subjects.