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

Treatment of deep and shallow intrabony defects. A multicenter randomized controlled clinical trial

Cortellini P, Carnevale G et al.
J Clin Periodontol 1998; 25: 981-987

In a small multicentre study, guided tissue regeneration (GTR) approximately doubled the attachment level gain from flap surgery.

In each of 23 patients selected with a similar pair of intrabony defects, one defect was treated with GTR using a bioresorbable membrane, and the other with a replaced flap. Amoxycillin was prescribed before the surgery and 1 week after. Maintenance recall was weekly to 2 months and monthly to 1 year. Initial mean probing depths were 6.7 mm in the flap group, and 7.4 mm in GTR defects; respective attachment levels were 7.9 mm and 8.3 mm.

At 1 year, the mean reduction in probing depth was 3.0 mm in the flap group and 4.3 mm with GTR, with respective mean attachment level gains of 1.6 mm and 3.0 mm. Improvements were greater in deeper defects. The authors note that their improvements were less than other reported data in uncontrolled studies, but this may result from their use of constant force probes for measurement, and the more "realistic" setting in 3 periodontal practices.

Local metronidazole application in maintenance patients. Clinical and microbiological evaluation

Rudhart A, Purucker P et al.
J Periodontol 1998; 69: 1148-1154

In a group of patients with treated periodontal disease, a double application of 25% metronidazole gel achieved the same as scaling and root planing at maintenance recall.

In 46 patients on a recall programme with at least 1 proximal residual pocket of 5 mm in each quadrants, such pockets in 2 randomly-selected quadrants were treated with 25% metronidazole gel, and in the other quadrants the pockets were scaled and root planed.

The gel was applied on the first day and 7 days later, and one other quadrant was scaled at each appointment.

Measurements with an automated probe showed significant reduction in probing depth of about 1.6 mm in both groups at 3 and 6 months, and insignificant changes in attachment levels. Quantitative microbiological studies showed similar reductions in both groups of *T denticola, P gingivalis* and *P intermedia.* Where *A actinomycetemcomitans* was present, neither treatment removed it.

Apical root resorption during orthodontic treatment of patients with multiple aplasia: a study of maxillary incisors

Levander E, Malmgren O et al.
Eur J Orthod 1998; 20: 427-434

Patients with more congenitally missing teeth had a higher risk of root resorption during orthodontic movement.

A comparison was made between 33 patients with 1-3 missing teeth (Group I) and 35 with 4-16 missing teeth (Group II). Their age range was 11-20 years (mean 15), and all were treated principally with fixed edgewise appliances. The aim of orthodontic treatment was to provide optimal conditions for prosthodontic restoration including implants if indicated, or to close the arch where no prosthesis was indicated.

Apical resorption on maxillary incisors according to a 5-point scale was evaluated from similarly positioned long cone parallel technique radiographs, taken before and after orthodontic treatment. In Group II, 35 of 111 incisors (32%) had resorption between 2 mm and one-third of the original root length and in Group I, 4 of 15 (5%).

The authors note that severe resorption may compromise the status of retained teeth, particularly those to be used as abutments in patients with several congenitally missing teeth.

Oral hygiene in the control of occlusal caries

Arrow P
Community Dent Oral Epidemiol 1998; 26: 324-330

A professionally-led oral hygiene programme for caries prevention achieved similar results to a positive control programme of dental health education, fissure sealants and fluoride application, but appeared to involve greater dependency on professional attention.

In Western Australia, 207 6-year-old children and their parents were given instruction on occlusal plaque and caries, and instructed in occlusal brushing which was recommended for use twice daily. Teeth were then professionally cleaned with a fluoride paste. Recall was from 6-12 months, depending on a system of risk assessment, when all procedures were repeated. The control group of 197 children were given a 10% SnF_2 paste application on newly erupted molars, and glass ionomer fissure sealants if caries risk was assessed as high.

The 2 year study was completed by 179 test and 156 control children. In the test group, proportionately 34% more visits were made than in the control group. The 24-month caries increment was 0.3 DF teeth in both groups,and there were no differences between groups in plaque levels, with a slight significant plaque decrease in all children from baseline to 2 years. The authors recommend the public health promotion of twice- daily brushing with fluoride toothpaste and prevention aimed at children with deciduous caries or hypomineralised molars.