

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.

The abstracts on this page have been chosen and edited by John R. Radford.

FLUOROSIS

Comparison of dental esthetic perceptions of young adolescents and their parents

Kavand G, Broffitt B *et al.* *J Public Health Dent* 2012; **72**: 164–171

Fluorosis in over one quarter of 13-year-olds who grew up in an area with water fluoridation.

The Iowa Fluoride Study, ironically cited by the anti-fluoridation lobby, has quantified fluoride exposures and the health of 698 children from birth. This paper focuses on dental aesthetics, and comprises just one aspect of this longitudinal study. The investigators used the Fluorosis Risk Index to quantify fluorosis. They also asked the children and their parents to answer questionnaires about the child's dental aesthetic. From the original cohort, 550 13-year-olds were recruited although a further 174 were excluded because they were receiving orthodontic treatment. One quarter of children demonstrated fluorosis. When the variable was the 'parsimonious' number of maxillary anterior zones exhibiting fluorosis, both the adolescents ($p = 0.03$) and their parents ($p = 0.002$) reported they were concerned with the dental appearance.

DOI: 10.1038/sj.bdj.2012.1010

INTERARCH TOOTH SIZE DISCREPANCY (ITSD)

Clinical management of tooth size discrepancies

Grauer D, Heymann GC. *J Esthet Restor Dent* 2012; **24**: 155–159

As if it is a disease, it has been reported that as many as one third of orthodontic patients have 'clinically significant ITSD'.

If the ratio of the widths of the mesiodistal dimensions of the anterior teeth is $<77.2\%$, the authors argue that 'either the lower teeth are too narrow, the upper teeth are too wide, or a combination of both' and vice versa if $>77.2\%$ (from Bolton WA. *Angle Orthod* 1958; **28**: 113–130). When ITSD is <2 mm, orthodontic treatment is the preferred approach. If ITSD >2 mm, 1) the teeth could be reduced in size by judicious interproximal enamel stripping, or 2) the width of the teeth increased by restorative techniques, in addition to possible orthodontic treatment. If the patient is uncomfortable with these more invasive approaches, 'the orthodontist could finish the case' by accepting a sub-optimal overjet and/or overbite, and/or altering the inclination of the incisor teeth.

DOI: 10.1038/sj.bdj.2012.1011

IATROGENESIS

Quantification of residual dentine thickness following crown preparation

Davis GR, Tayeb RA *et al.* *J Dent* 2012; **40**: 571–576

Potential damage to the dental pulp.

This study used X-ray microtomography, a miniaturised form of CT, to map dentine before and after crown preparation, in 16 extracted intact incisor teeth. A single operator endeavoured to cut metal ceramic crown preparations of common design characteristics and dimensions (2 mm reduction incisally, 1.2 mm labially and a 0.5 mm chamfer finish line palatally and proximally). Although 'factors that affect the pulp size and condition such as age and pre-existing chronic inflammation could not be taken into consideration', the investigators assert the labial proximal line angles were consistently over-prepared 'with a tendency to leave considerably less than 2 mm residual dentine protecting the pulp'. It was not discussed as to whether or not pulpal death is as a consequence of residual thickness of dentine or microbial leakage.

DOI: 10.1038/sj.bdj.2012.1012

'MICRO-ORGANISMS STRESSED AND ENTOMBED'

Should deciduous teeth be restored? Reflections of a cariologist

Kidd E. *Dent Update* 2012; **39**: 159–166

'...wanton neglect?'

'82% (of carious teeth analysed) exfoliated without the child attending the practice in pain' (Levine RS, Pitts NB *et al.* *Br Dent J* 2002; **193**: 99–103). Yet this has to be balanced with another paper that reported half of children experience at least one episode of dental pain. There has been paradigm shift in the role of the dental care professional when facilitating children's oral health with advice now shared with the parents such as 'You can control caries by keeping these teeth clean' instead of 'I will cope with your child's caries by filling the tooth, you do not have to worry'. Besides this change in locus of control, traditional methods for substrate elimination such as fissure sealing, ART and stepwise excavation have been shaped by non-restorative cavity treatment (open the cavity for plaque control), partial caries removal (stepwise, but no re-entry) and the Hall Technique.

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