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.

STATINS: BENEFITS AND HARMS

Should people at low risk of cardiovascular disease take a statin?

Abramson JD, Rosenberg HG *et al. BMJ* 2013; **347:** f6123

Statins have no overall benefit for those at low risk of cardiovascular disease and 'prescribing guidelines should not be broadened'.
Yet the 2013 Cochrane Review concluded that statins 'reduce all cause mortality and cardiovascular events without increasing the risk of adverse events among people at low risk of cardiovascular disease'. These prescribing guidelines are considerably broader than those made by the same body only two years earlier, and by NICE's 2006-08 guidance and the 2011 American Heart Association guideline. In this paper, the investigators calculated that for those at low risk of cardiovascular disease, 140 subjects were required to take statins for 5 years to prevent one heart attack or stroke. However, 20% of people who take statins, experience side effects that include muscle symptoms, increased risk of diabetes especially in women, liver inflammation and sexual dysfunction. Although dental practitioners do not have to have a detailed knowledge of the benefits and harms for those taking statins, they must be aware of drug interactions between statins and macrolides, and for specialists, interactions between statins and ketoconazole.
DOI: 10.1038/sj.bdj.2014.375

REPLICATING ANISOTROPY

The influence of varying layer thicknesses on the color predictability of two different composite layering concepts

Khashayar G, Dozic A *et al. Dent Mater* 2014; **30:** 493–498

Using the same composite shade for both 'dentine' and 'enamel' offers a more predicable shade match.
Is the perfect composite shade match mere serendipity? For as the thickness of enamel decreases from the incisal third of the tooth, there are both changes to the chroma and value. Tooth structures are anisotropic (properties are directional dependent) whereas dental composites are isotropic (properties of a material are identical in all directions). There are two methods for carrying out the 2-layer composite layering technique. The first uses the same shade of composite for both the 'dentine' and 'enamel' with the latter composite having increased translucency. In the alternative method, the 'dentine' and 'enamel' composites are of different shades and translucencies. In this study, a spectrophotometer was used to measure the CIE L*a*b* values for 36 bi-laminate wedge specimens formed from six different composite systems. Regardless of approach, even for small changes in the thicknesses of composite, there were dramatic differences in shade, particularly when using different shades for the 'dentine' and 'enamel'.
DOI: 10.1038/sj.bdj.2014.377

AUTOMATED SHADE SELECTIONS

Confirmation of theoretical colour predictions for layering dental composite material

Mikhail SS, Johnston WM. *J Dent* 2014; **42:** 419–424

This theory may offer a basis for a computer-based optical measuring instrument, eliminating the need for shade guides.
Can the application of Kubelka–Munk (K-M) theory be used in shade selections for dental composite resin layering techniques? Simplistically, K-M theory uses '...calculus to solve the differential equations for the change of light fluxes...as a function of scattering, absorption, and distance...' (for background and when applied for enamel and dentine, see *J Dent Res* 2001; **80:** 449–452). In this study, single and double layers of different shades of composite were placed in optical contact with a grey backing. The investigators found disagreements between those values predicted by K-M theory and those measured using the CIELAB and the CIEDE2000 colour difference formulas, concluding that 'colour difference discrepancies generally ranged around the perceptibility threshold'. However, the same group found that K-M theory has provided an accurate model of reflectance for single layers of dental composite and translucent porcelain. It is noted that K-M theory 'assumes an infinitely large diameter layer where there is no accounting for edge effects.'
DOI: 10.1038/sj.bdj.2014.376

BLEACHING – A MORAL IMPERATIVE?

The law is an ass: legal and ethical issues surrounding the bleaching of young patients' discoloured teeth

Kelleher M. *Fac Dent J* 2014; **5:** 56–67

The penalty could be jail for six months, a fine for £5,000, or both.
Bleaching products with concentrations above 0.1% hydrogen peroxide cannot be supplied to those under 18 years of age (EC Directive 2011/84/EU). The author argues that this part of the directive is flawed, mainly from an ethical perspective but also when weighing-up the advantages and disadvantages of alternative treatments for discoloured teeth, particularly their invasive nature. There is the continuing argument as to whether or not bleaching agents are 'cosmetic products' or 'medical devices'. In a historic judgment, Lord Slynn of Hadley stated 'Darker teeth may be less attractive than sparkling white teeth but it does not seem to me that they constitute a 'handicap' within the meaning of this Medical Devices Directive.' Such views touch on a recent claim by The British Association of Aesthetic Plastic Surgeons that 'younger patients can be vulnerable and often have self-esteem issues.' Optimal outcomes following bleaching for 'young patient(s)' whose dental aesthetic were severely compromised are illustrated.
DOI: 10.1038/sj.bdj.2014.378