

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.

SHAPE MEMORY ALLOYS

Nickel–titanium (NiTi) arch wires: the clinical significance of super elasticity

Pandis N, Bourauel CP. *Semin Orthod* 2010; **16**: 249–257

Is the new superior to the old?

Pseudoelasticity (superelasticity) is the ‘response to an applied stress, caused by a phase transformation between the austenitic and martensitic phases of a crystal’. This narrative review focuses on the use of such shape memory alloys in orthodontics. Archwires formed from pseudoelastic alloys are marketed as offering longer intervals between visits, yet at the same time generating ideal forces for tooth movement. However, when compared with the properties of conventional alloys, they are more expensive, difficult to shape, cannot be soldered or welded and corrode. In addition, clinical studies have not been able to demonstrate any ‘significant differences (between tooth movement) among superelastic, nonsuperelastic NiTi wires, and multistranded stainless-steel wires.’ For a robust examination of the literature, access *Cochrane Database of Systematic Reviews* 2010, Issue 4. Art. No.: CD007859.

DOI: 10.1038/sj.bdj.2011.644

ORTHODONTIC NEED

Comparison of orthodontic treatment need by professionals and parents with different socio-demographic characteristics

Doğan AA, Sari E *et al.* *Eur J Orthod* 2010; **32**: 672–676

Intriguingly, there is a perception that girls and those children from affluent backgrounds would not to the same degree as others, benefit from orthodontic treatment.

In this cross-sectional study, the orthodontic need of 208 Turkish children was assessed by their parents and one orthodontist only. This abstract will describe only results for the aesthetic component (AC) of the IOTN. Parents of girls, compared with boys ‘...tended to rate their children’s dentition towards the more attractive end of the AC scale’. If fathers had received continuing/higher education, parents perceived the dental appearance of their children more favourably. Likewise, the orthodontist scored this component higher if the child was from a more affluent background. The orthodontist also considered when compared with parents, a higher proportion (51.4% v 33.6%) of the children had a need for treatment in order to improve their dental aesthetic.

DOI: 10.1038/sj.bdj.2011.645

CONE-BEAM COMPUTED TOMOGRAPHY

Editorial: “All that glitters is not gold”: standards for cone-beam computerized tomographic imaging

Scarfe WC. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2011; DOI: 10.1016/j.tripleo.2011.01.006

Nonmaleficence, entrepreneurialism and beneficence.

The author explores tensions in the use of cone-beam computed tomography (CBCT), from the perspective of different ‘stakeholders’. For a child who is particularly susceptible to radiation, a front-page article in *The New York Times* highlighted concerns with the use of CBCT in orthodontics. Conflict of interests between the manufacturer and dentist were also identified. For example, the ‘dental trades’ provide ‘sponsored’ continuing dental education. Then there are strains between those ‘touting the use of CBCT imaging as a method of increasing practice revenues’ and those whose role is fiscal control. Many of the legal issues rehearsed in this editorial pertain to American State Law. Nevertheless, there would appear to be a universal requirement that the entire image volume should be interpreted.

DOI: 10.1038/sj.bdj.2011.646

MIXED MESSAGES

Use of cone-beam-computed tomography in endodontics. Joint Position Statement...

Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2011; **111**: 234–7, *J Endod* 2011; **37**: 274–277 and www.aae.org/guidelines

Inconsistencies in this Joint Position Statement as to the uses of cone-beam-computed tomography (CBCT) in endodontics.

In contrast to conventional planar radiography, CBCT allows visualisation of teeth and surrounding structures in three dimensions and, in addition, it overcomes some of the issues associated with ‘complex anatomy and surrounding structures’. This Guideline and Position Statement 1) reports the results of a web-based survey of members of the American Association of Endodontists, and then 2) makes recommendations as to the uses of CBCT. Despite over one third of respondents stating that they used CBCT, it is recommended that ‘CBCT must not be used routinely for endodontic diagnosis or for screening purposes...’ and used only as ‘...an adjunct to two-dimensional imaging in dentistry.’ Yet this has to be balanced with ‘informed refusal’. When informed refusal is made, it is suggested that the practitioner must state in the clinical notes why the patient has declined CBCT.

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