

- of restorations in Florida. *J Am Coll Dent* 1998; **45**: 27–33.
22. Combe EC, Burke FJT, Douglas WH. *Dental Biomaterials*. London: Kluwer Academic Publishers, 1999; pp.221–231.
 23. Mount GJ. Some physical and biological properties of glass ionomer cement. *Int Dent J* 1995; **45**: 135–140.
 24. Akinade AO. Adhesion of glass polyalkenoate cements to collagen. *J Dent Res* 1994; **73**: 181 (Abstr. 633).
 25. Mount GJ. Longevity of glass ionomer cements. *J Prosthet Dent* 1986; **55**: 682–684.
 26. Mount GJ. Clinical requirements for a successful 'sandwich' – dentine to glass ionomer cement to composite resin. *Aust Dent J* 1989; **34**: 259–265.
 27. Powis DR, Folleras T, Merson SA. Improved adhesion of a glass ionomer cement to dentin and enamel. *J Dent Res* 1982; **61**: 1416–1422.
 28. Qvist V, Laurberg L, Poulsen A, Teglers PT. Longevity and cariostatic effects of everyday conventional glass-ionomer and amalgam restorations in primary teeth: three-year results. *J Dent Res* 1997; **76**: 1387–1396.
 29. Oilo G, Um CM. Bond strength of glass-ionomer cement and composite resin combinations. *Quint Int* 1992; **23**: 633–639.
 30. Meryon SD, Jakeman KJ. Aluminium and dental materials. A study *in vitro* of its potential release and cytotoxicity. *Int Endodont J* 1987; **20**: 16–19.
 31. Randall R, Wilson NHF. A comparison of glass cermet cements and amalgam restorations in primary molars. *J Dent Res* 1997; **76**: 1066 (Abstr. 378).
 32. Welbury RR, Walls AWG, Murray JJ, McCabe JF. The 5-year results of a clinical trial comparing a glass polyalkenoate (ionomer) cement restoration with an amalgam restoration. *Br Dent J* 1991; **170**: 177–181.
 33. Welbury RR, Shaw AJ, Murray JJ, Gordon PH, McCabe JF. Clinical evaluation of paired compomer and glass ionomer restorations in primary molars: final results after 42 months. *Br Dent J* 2000; **189**: 93–97.
 34. Hse KMY, Leung SZK, Wei SHY. Resin-ionomer restorative materials for children: a review. *Aust Dent J* 1999; **44**: 1–11.
 35. Papathanasiou AD, Curzon MEJ, Fairpo CG. The influence of restorative material on the survival rate of restorations in primary molars. *Pediatr Dent* 1994; **16**: 282–288.

BOOK REVIEW

Orthodontic Radiographs – Guidelines (Guidelines for the Use of Radiographs in Clinical Orthodontics). 2nd edn. K. G. Isaacson and A. R. Thom, eds. BOS, London, 2001. ISBN 1-899297-05-7. (Available from the British Orthodontic Society, 291 Gray's Inn Road, London WC1X 8QF: UK £7.00; Overseas £10.00 incl. p&p.)

The first edition of this booklet was produced in 1994 by the British Orthodontic Society. It has now been updated to take account of recent statutory changes, particularly Ionizing Radiation (Medical Exposure) Regulations 2000 – IR(ME)2000. This legislation requires that employers establish referral criteria for referrers and for IR(ME)R practitioners to take responsibility for the justification of medical exposures. To this end this booklet is an invaluable aid with respect to orthodontic radiographic selection criteria.

Patient dose levels have shown a reduction in recent years following improvements in radiographic equipment design and the use of fast films. However, there has been a steady increase in the frequency of radiographic examinations taken in dental practice. This is particularly so with orthodontic practice, where data from the Dental Practice Board has shown a 110% increase in the number of lateral cephalograms in the last five years.

There is thus a need for guidelines to assist dental practitioners through expert advice to minimize the number of unnecessary radiographs. This booklet has been produced with this in mind and contains simple, sensible and easily followed flow diagrams to help the clinician decide whether and when radiographs are required for orthodontic treatment planning.

The booklet opens with a succinct account of radiation hazards, risks and aspects of IR(ME)R2000. It discusses the indications for taking radiographs before outlining the types of views used in orthodontic practice. The last few pages of the booklet summarize digital radiography, the medico-legal aspects of orthodontic radiography, quality assurance and concluding with a comprehensive list of supportive references. The booklet is well thought out and easy to follow.

If I had to nit pick, I would argue with the statement that the dental panoramic tomogram (DPT) and the upper standard occlusal together could be used to assess the vertical position of unerupted canines. The upper standard occlusal view, because of its steep vertical angulation, tends to show a palatally located canine higher than it actually lies in relation to the upper incisor tooth root, and is thus not particularly accurate for demonstrating its vertical position. It would have been better to say that, by using these two views and the principles of parallax, the bucco-palatal displacement of an unerupted canine can be determined. In

fact, an example of this principle is illustrated. Further, it would have been helpful if the occlusal view had been printed above, rather than below, the DPT to make it simpler to follow the tube shift and perhaps to have chosen a technically more accurate panoramic image cropped to show more of the maxilla and less of the mandible.

Despite these minor criticisms, I can thoroughly recommend this publication, which is informative and well laid out. It is a useful document for employers and the information it contains should be included in their selection criteria information for those requesting and taking orthodontic radiographs.

John Rout
University of Birmingham Dental
Hospital

Self-Assessment Answers

- | | |
|------------|----------------|
| 1. A | 6. B, C, D |
| 2. A, B, D | 7. B, D |
| 3. A, C | 8. A, D |
| 4. A, C, D | 9. A, D |
| 5. B, C, D | 10. A, B, C, D |