

FEATURES SECTION

Book review

Cone-beam Volumetric Imaging in Dental, Oral and Maxillofacial Medicine

J. E. Zöller, J. Neugebauer
Quintessence, London, 2008
228 pp., hb & DVD, £118
ISBN 9783938947463

The authors of this textbook are based at the University of Cologne in Germany and they have produced an atlas devoted to the use of cone-beam volumetric imaging (CBVI). The book is divided into 3 sections, the first section covering the technological aspects of CBVI, the second the use of the technique in diagnostic imaging and the third its use in treatment planning.

The first section describes how these machines work and explains fundamental differences between CBVI and conventional computed tomography. Aspects such as image quality are well described and the authors should be congratulated on making this whole section so easy to follow.

The second part covers the use of CBVI in diagnosis of dental conditions, including dental anomalies, impacted teeth, cysts and benign and malignant tumours of the jaws. In addition bony diseases and conditions affecting the maxillary sinuses and TMJ are illustrated.

The third section details the use of CBVI in treatment planning. This includes planning for implants and also CBVI supported navigation procedures and computed assisted orthognathic surgery.

The book is very well laid out and the photographs are of excellent quality. The book is packed full of radiographic images. Sometimes the images were a little small to see the condition being demonstrated. This was often compensated by the use of the accompanying DVD that contained short video clips of the conditions at a much larger size.

There are now many CBVI units on the market so to see a wider range of images from other machines would have helped. Also, more on the normal anatomy would have been useful as some of the images were of sites outside of the jaws that many practitioners will be unfamiliar with. As an atlas a whole range of dental disease is illustrated in the book. However, in some cases conventional plain film imaging will have demonstrated

the conditions adequately at a reduced radiation dose. This highlights the need for the use of selection criteria in this emerging imaging modality.

Although not all the chapters are relevant to orthodontists there is plenty there to keep the orthodontist interested particularly the parts on dental anomalies, craniofacial syndromes and surgical planning using CBVI data. Overall I found the book an enjoyable read and would be useful to orthodontists who are thinking about or have access to CBVI.

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Orthodontic Radiographs – Guidelines 3rd Edition 2008

K. G. Isaacson, A. R. Thom, K. Horner, E. Whaites
British Orthodontic Society, London, 2008
24 pp., sb
ISBN 1899297073

The first edition of these guidelines was published in 1994 and it is now in its third edition. The guidelines are presented in a similar format to the previous edition and each section is clearly laid out and easy to read.

The section on legislation has been expanded and improved to include more information on the current UK legislation particularly on the Ionizing Radiations Regulations 1999 which are mainly concerned with the safety of workers and the general public.

The part on radiation dose has been updated to describe in more detail what is meant by the term radiation dose as this can be a confusing subject. The effective doses and subsequent risks for the various orthodontic views have also been calculated.

The current recommendations regarding intra oral, panoramic and cephalometric equipment are listed. This is followed by a description of the types of digital equipment available but in less detail than in the previous edition. Cone beam computed tomography (CBCT) which is an emerging technology is then outlined. This is a low radiation dose technique that produces three-dimensional images of the teeth and jaws. It does have orthodontic applications, but currently there are no published guidelines described

as to when CBCT should be used. Perhaps by the time the fourth edition of these guidelines is published there will be some evidence based guidelines available.

The main section is devoted to the use of selection criteria for the orthodontic radiography under the headings: 'assessment and treatment planning' and 'monitoring of treatment'. This explains when radiographs are indicated along with the scientific evidence to support their use. At the beginning, there is a simple table containing a list of questions that the clinician should consider before requesting radiographs. This is very useful and can be applied to all specialties that request radiographs. Flow diagrams to help the clinician in requesting radiographs are again used and remain unchanged since the last edition.

The diagrams are clear throughout. In addition, there are many new good quality photographs that show how the radiographic views are taken. The radiographs have been printed in black and white rather than with the blue tinge as seen in the previous edition, and this has made them clearer. I also like that fact that the references appear under the written text rather than at the end of the book so it was easy to see the supporting evidence without flicking back and forth through the book. Overall this is an excellent book and has been updated very well. It remains essential reading to any orthodontist or member of the orthodontic team.

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