

FEATURES SECTION

Book Reviews

The Invisalign® System

Orhan Tuncay (ed.)
Quintessence, London, 2006
330 pp., hb, £140.00
ISBN 1850971277

This is an impressive-looking book, edited by Tuncay (with John Sheridan among the list of contributors). It is split into five sections and 31 chapters.

Section I, 'The History of the Concept', gives the reader the background and evolution of the concept, and its use in orthodontics and general dentistry.

In Chapter 2, John Sheridan gives an overview of the technique used in orthodontics. He discusses the types of tooth movement possible and how to create force in the desired direction by means of appliance alteration and composite additions, etc. Individual mechanics are discussed, and the illustrations to accompany each gives the clinician a good idea of how they are achieved.

Section II, 'Modeling the Invisalign® System' consists of 13 chapters. Each, in turn, discusses (in much detail) every stage involved in producing the aligners, including the impression and bite registration stage through to the manufacturing process, and how software is manipulated to diagnostically set up cases. The authors also discuss the various attachments that can be used for different purposes, again with illustrations to support each stage. Even their use as a functional appliance is mentioned. This is followed by an explanation on the 'Set-up' phase and how the 'Clin-Check' software system is used. Chapter 12 discusses the 'staging' process, which is defined as the collection of steps and procedures used to arrive (in sound clinical and biological fashion) at the final desired position of the teeth, using the 'Treat' software. 'Set-up' and 'Stage' is performed by a technician (as determined by a clinician's treatment prescription and preferences) and takes anchorage, etc., into account. There is even a Bolton analysis tool to calculate the tooth-size discrepancy that is present in each case! The remainder of this section discusses the principles and considerations of overcorrection with Invisalign® and the three-dimensional superimposition tool (to check progress and lag). It also illustrates the virtual Invisalign®

practice pages that can be used to order products, view cases or even to discuss cases with other clinicians via the forum. Finally, this section is completed with an introduction to computer-oriented dental movements, using a novel measurement system implemented by align technology software.

Section III takes a look at the performance characteristics of the Invisalign® system. It discusses the stresses that develop within the aligners during manufacture, as well as during tooth movement, and Chapter 19 presents a detailed account of the actual biological elements of tooth movement. The later chapters discuss extraction treatment using illustrations and detail regarding moment-force ratios, and the application of force using the Invisalign® system.

Section IV looks at the clinical considerations needed when using the Invisalign® system. It takes the reader through the advantages (but not the disadvantages) of using the system, with specific case illustrations (most of which are not particularly challenging malocclusions). One chapter is dedicated to interproximal enamel stripping, whilst another considers the importance of facial aesthetics and its analysis. Chapter 28 considers the use of Invisalign® in orthognathic cases. However, with a fixed appliance required at some point in this type of treatment (even if it may be for a foreshortened time), one has to ask if it is worth the bother (and expense)? There is only one clinical case example to illustrate, but it does have quite an impressive finish. Chapter 29 presents a feasibility study of the Invisalign® system in adolescents, but with many design flaws in this study, one has to be careful in interpreting the results.

The final section, 'Office Design and Technology', is a chapter specifically dedicated to recommendations on practice design.

The book is not designed to be a 'how-to' manual, but an educational tool for any clinician who uses this system and it succeeds to be just that. For anyone who uses the Invisalign® system (or for anyone who wishes to start), this volume gives a good insight into not only its clinical aspects and possibilities, but also its technical side, so that a clearer understanding of the concept is achieved.

Angharad Brown

Manual of Temporomandibular Disorders

Edward F. Wright
Blackwell, Oxford, 2005
354 pp., sb, £59.50
ISBN 0813807522

This is a very structured and schematic medical book. Every chapter starts with a frequently asked questions (FAQ) section, which introduces the reader to its contents.

Throughout every chapter 'focal points' and 'quick consults' act as very helpful summaries aided also by the 'technical tips', which highlight the clinical expertise of the author. Pictures and diagrams are very clear and make the manual a very practical consultation guide.

The author dedicates much of his writing to the diagnostic side of temporomandibular disorders (TMDs), covering a wide spectrum of diagnostic approaches, from classical imaging methods to manual diagnoses or orthodontic modalities. The complementary and psychological aspects, contributing much to diagnosis and treatment, are very well explained.

Unfortunately, the physiological and biomechanical aspects, which could support in particular the complementary treatment modalities, are not brought sufficiently to the surface, and one could still wonder how chiropractic, manipulative treatment of the cervical spine or acupuncture could improve TMD symptoms, although these types of treatments are overall increasingly accepted and used. Anyway, it has to be said that very little research has been done to show correlations between complementary medicine and orthodontic treatment in general.

The pharmacological section is complete and very well referenced. On the other hand, the surgical aspect of TMD, e.g. arthroscopy—which is still a widely used treatment option—is scarcely taken into consideration.

Nowadays, correlations between posture and TMD have become a very interesting subject. Although some exercises are described to 'improve the posture' and therefore improve TMD symptoms, no further reference or descriptions are available to understand this aspect of the disorder. Considering that a big part of the manual is dedicated to complementary medical therapies, which are often involved with postural problems of many kinds, this could have been developed further in relation to TMD.

The case scenarios in the last section of the book are very helpful tools to understand TMD, especially from a differential diagnosis point of view. The clinical implications and examples reported here are almost more educational than words or pictures.

The manual is extremely well referenced (using mainly recent references) and also includes an Internet access

that allows the reader to download appendices of the manual, making it even more practical and almost essential in these days of electronic dissemination and storage of information.

Although unable to make a professional comment on what appears to be a thorough and complete orthodontic/dental section (this not being the reviewer's personal field of expertise), Wright's manual could be considered overall as a 'must have' reference book. Its clarity makes it a very good book for dentists and orthodontists, but also for all the complementary disciplines and therapies that are confronted with the increasing number of patients suffering from TMD. The book covers all major aspects of diagnosis and treatment, inviting the clinician to approach and to understand the patient's suffering from different points of view.

Cristian Ciranna-Raab

Flexible Working and Training for Doctors and Dentists: a practical guide

Anne Hastie (ed.)
Radcliffe, Abingdon, 2006
208 pp., pb, £24.95
ISBN 1846190258

When I was asked to review the above book for the *Journal of Orthodontics*, I asked for a day or so to contemplate if I had the requisite skills and experience to do it justice.

I have never needed or wished to work or train flexibly in my career as a trainee or a NHS Consultant. I have, however, as Clinical Director of a Dental Hospital and a Speciality Training Programme Director, dealt with members of staff wishing to do so, and in increasingly large numbers over recent years.

I think the contributors to this book should be congratulated. They have compiled a reference resource that is comprehensive and well written. It will, of course, suffer in accuracy with the passage of time, but there are a lot of e-references to useful websites to keep the reader aware of developments.

With regard to dentistry, Liz Jones has produced a succinct chapter to add value to the other chapters of relevance. Anyone knowing Liz and of her own training pathway will be aware that flexible trainees would have no greater champion!

The book is, however, a little too 'English biased'. As devolution matures we see increasingly not one health service, but four. They all appear to be addressing workforce issues in slightly different ways and a UK-based trainee or clinician will need to be aware of the opportunities in all the UK health services.

This is a minor criticism, and overall the comprehensive and logical presentation of the topic leads the reader into areas that she (or he), may not have considered when first thinking of flexible training. Excellent chapters on pensions, maternity leave and other benefits, and illness and disability complement the more specific chapters relating to a 'single' career option, such as primary or secondary care.

During times of workforce change this type of text will encourage those members of the workforce who may have become lost to the professions to think again, and offers real practical advice about the alternative choices that are available.

Having read the book, I feel vindicated in accepting the challenge of providing a review. Before reading the book I thought I knew a lot about flexible careers; I didn't know enough, but thanks to this book I now do.

I certainly think that it is a useful addition to any deanery library and should be mandatory reading for all people involved in recruitment and retention of doctors and dentists.

Peter Durning

Panoramic Radiology

Vivian E. Rushton and John Rout
Quintessence, London, 2006
145 pp., hb, £28.00
ISBN 1850970807

This book is the second imaging book published in the Quintessentials for General Practitioners Series. The book, written by two highly regarded authors, is devoted exclusively to panoramic imaging.

The first chapter describes the history of the imaging modality from its beginnings using a static intra-oral X-ray source up to today's equipment using a rotating extra-oral radiation source with multiple centres of rotation. The following chapter describes the theory and the practical aspects of the examination and importantly also includes the appropriate cross-infection measures that should be followed. Chapter 3 describes the radiographic anatomy, using labelled line diagrams together with the panoramic radiograph, to allow easy identification of anatomical structures.

It was very useful to see a whole chapter dedicated to radiation risk and dose, and practical measures of dose reduction. This is particularly relevant considering a recent UK survey showing that doses from a panoramic radiograph differed by a factor of 200. Chapter 4 describes thoroughly the diagnostic accuracy of panoramic radiography for the common dental diseases in comparison to intra-oral radiography. It makes the point well that intra-oral radiography is superior to panoramic

radiography for caries diagnosis, depiction of periodontal bone levels and periapical disease. The appropriate uses of panoramic radiography are given, based on current UK guidance.

Quality assurance in dental radiography is now mandatory in the UK. It was therefore helpful to see a whole chapter devoted to this aspect. This is the longest chapter in the book, and is comprehensive, illustrating a variety of film faults and describing how these can be corrected. The final chapter describes the clinical and radiographic features of the common diseases that may be seen on panoramic radiographs. For each disease there is a cut down panoramic picture showing the showing the classic radiographic features.

Overall, this is an extremely enjoyable read, and contains excellent guidance on the use of this imaging modality in general practice. The diagrams and tables are easy to understand, and the reproduction quality of the radiographs is generally good throughout. I would highly recommend this book to not only general dental practitioners, but to anyone who uses panoramic imaging in their clinical practice.

Nicholas Drage

Color Atlas of Dental Hygiene

Herbert F. Wolf and Thomas M. Hassell.
Thieme, Stuttgart, 2006
340 pp., sb, €49.95
ISBN 3131417617

This book is specifically aimed at the dental hygienist. It draws together the whole range of dental hygiene practice, which I have not seen in a book before. It covers a comprehensive range of periodontal conditions that may present, and it is also particularly useful to have included oral pathological alterations of the gingiva and periodontium, which one would normally have to reference separately in oral medicine textbooks. The colour photographs and illustrations are excellent.

I was heartened to see a dedicated section entitled 'Initial Treatment 1—Oral hygiene by the Patient', which is covered in great detail and will be particularly useful to dental hygiene students.

The downside of this book maybe some of the American terminology used. Also in the section on Classification of Periodontal Disease, the authors present a personal review of the 1999 classification, which is rather biased against it.

That aside, I would recommend this book to dental hygiene students and qualified dental hygienists. I will certainly be using it as a resource in my teaching practice.

Carole Harris