

## Book Reviews

### The Prenatal Human Cranium—Normal and Pathologic Development (1999)

Authors: Inger Kjær, Jean W. Keeling and Birgit Fischer Hansen

Publisher: Munksgaard, Copenhagen

Price: DKK 262.50; US\$ 38

ISBN: 87-16-12146-5

This small book is a brief, but beautifully illustrated review of the early development of the mandible, maxillary complex, nasal cavity, glands of the cranial base (pituitary and vomeronasal organ), and 'theca cranium' (the outer bony covering of the brain). The authors describe the sequence of osseous development, the relationship between cranium and brain development, and include a major section on craniofacial malformations, disruption and dysgenesis that covers the major congenital problems including facial clefts.

Since orthodontists often think of the cranium as distinct from the face, they might fail to even look at this book simply because of its title. In fact, it is an elegant summary of what is known about both normal and abnormal development

of the face and jaws, as well as the cranial base and the bony cranium. Its strengths are the high quality of the illustrations, and the succinct and pertinent text. Rather than using many words to describe something, the book shows it, frequently in colour.

The book will be valuable to postgraduate orthodontic students and residents, for whom it is an excellent introduction to craniofacial development. It is also recommended to any practitioner who wishes to be brought up to date, quite painlessly, on what has been learned recently about both normal and abnormal development of the facial and cranial structures.

William R. Proffit

### Permar's Oral Embryology and Microscopic Anatomy, 10th edn (2000)

Authors: Rudy C. Melfi and Keith E. Alley

Publisher: Lippincott Williams & Wilkins, London

Price: £25.50

ISBN: 0-683-30644-8

This classic volume, one of the few specifically written for students training to be dental hygienists, dental surgery assistants and dental technicians, has been going strong since 1955. For the new 10th edition (and the new millennium) it has been substantially revised and many photomicrographs, including some excellent ones in colour, have been added. The text is enlivened by ample allusions to clinically relevant topics such as cleft palate, fluorosis, and anomalies of tooth shape and number. There is also a

revealing series of illustrations comparing the external appearance of different types of carious lesion with histological preparations through the same specimens. As an innovation likely to become more widespread, a reader wishing to find out about genes in tooth development is directed, not to an article in a journal, but to a website.

All the relevant aspects of oral histology are covered, ranging from development of the face, palate and teeth, through the hard and soft

tissues of the mouth to salivary glands and temporomandibular joint. The writing style is clear and concise, and although the student is assumed to have some knowledge of biological terminology, anatomical jargon is explained in an early chapter devoted to a classification of tissues of the body. So, in the absence of a real live teacher, the book could be used for independent study and, because of its logical organization, and the excellence and abundance of the illustrations, it may well be useful in this regard as an introductory text for dental students.

However, despite the changes made for the new edition, the book is showing its age just a little: a few of the black and white photographs are a bit fuzzy, others are poor in contrast and the emphasis of the whole work is still very much on structure with only occasional comments on function. Some attempt has been made to include topics of contemporary interest. Indeed,

on the back cover we are promised that 'a new chapter on salivary glands (Chapter 12) includes information on demineralization, remineralization, fluoride, bacterial diseases and HIV'. The reader's appetite is whetted, but alas, no mention of these topics can be found in the rather short Chapter 12. So for an up-to-date chapter on salivary glands we will have to wait for the 11th edition. It will also be useful to replace some of the older photomicrographs with a slightly enlarged text allowing some discussion of the functions of the tissues described.

Despite these drawbacks, the present volume is good value for money and still has a role as a straightforward account of oral tissues, much of it necessary knowledge for anyone professionally involved with the problems of maintaining oral health.

D. A. Luke

## The Enigma of the Vertical Dimension (2000) Monograph No. 36, Craniofacial Growth Series

Editor: J. A. McNamara, Jr

Publisher: Center for Human Growth and Development, The University of Michigan, Ann Arbor, MI 48109-4-6, USA

Price: \$85

ISBN: 0-929921-32-1

This book brings together a series of papers from the 1999 Moyers Symposium and the Twenty-fifth Annual Conference on Craniofacial Research with the intention of producing a 'state-of-the-art' volume on the vertical dimension.

Sixteen papers are presented in separate chapters, and cover clinical and research topics, and orthodontic and non-orthodontic perspectives. As would be expected from a number of authors and writing styles, some of these papers are more easily read than others.

When extremes in vertical dimension are considered, it is generally the long face syndrome (LFS) that receives the most attention, and this is also the case here. Short face syndrome (SFS) is examined in less detail, perhaps reflecting the

orthodontist's view on the difficulties associated with LFS management.

The development of vertical dysplasia is considered in several chapters. The relationships between nasal airway compromise, posture and facial growth are examined, and the relevant aspects of the respiratory regulating system explained for all those who may have forgotten. The features of SFS and LFS are described in detail, and related to their importance in diagnosis and treatment planning.

A variety of treatment modalities are described, from early treatment in the growing child to complex mechanics in adult patients. The use of functional or orthopaedic therapy is discussed, the most surprising aspect of which is the promotion

of vertical-pull chin-cup treatment in an attempt to prevent the extrusion of posterior teeth. Franchi and Baccetti describe the prediction of peak mandibular growth velocity by the developmental stage of the cervical vertebrae. The vertebrae are captured on most lateral cephalometric radiographs and this may provide an additional tool in the timing of growth modification treatment. Once again, Kim shows severe malocclusions, which would have been destined for orthognathic surgery in the hands of many orthodontists, treated with multiloop edgewise archwire therapy. Reverse-looped archwires are also described for the management of deep bite cases.

A very interesting section by Palla looks at the vertical dimension from the prosthodontist's

perspective. A number of issues related to occlusal vertical dimension change, muscle tone, interocclusal space, and relapse are considered. These factors are also relevant to the orthodontist and provide an illuminating read.

A minor criticism would be that there is little mention of long-term growth changes in the vertical dimension, stability, and relapse. This volume is well illustrated with black and white photographs, and clear diagrams. The references provided at the end of each section are comprehensive. In summary, this is a useful reference text containing the most up to date information from a number of experts in this field.

Samantha Hodges

## Early Orthodontic Treatment (2000)

Author: J. Daniel Subtelny

Publisher: Quintessence Publishing Co. Ltd., New Malden, Surrey, UK

Price: £65.00

ISBN: 0-86715-372-5

In this textbook, the author presents his very detailed view on early orthodontic treatment procedures. Some contributions to this comprehensive book were written by other well-known teachers and researchers at the Eastman Dental Center, University of Rochester: Leonard S. Fishman, Mark A. Moss, Scott Stein, and Ross H. Tallents.

In 15 chapters the indications, timing, and treatment methodologies for all different kinds of early treatable dentofacial deformities: maxillary jaw malocclusions, mandibular jaw malocclusions, including an important emphasis on mandibular asymmetry, vertical jaw malocclusions, cleft lip and palate, as well as hemifacial microsomia are described in an analytical way. Furthermore, early temporomandibular joint problems and psychological factors are discussed.

Each item is clearly illustrated regarding long-term beneficial effects and limits of treatment techniques that often evolve during the treatment period. One feature of special value is that reports on clinical failure and misjudgement are not omitted.

In conclusion it can be stated that this textbook offers a valuable extension to every orthodontic library and is eminently readable. The multitude of well-documented cases serves the experienced clinician as a source of clinical inspiration and can assist individual decisions on interceptive indications. For the orthodontic student this systematic overview of techniques may serve as a backbone for the study of early orthodontic treatment and as a starting point for future research in this domain.

P. De Wilde and H. Wehrbein

## Interceptive Orthodontics (1999), 4th edn

Author: Andrew Richardson

Publisher: British Dental Association, London, UK

Price: £29.95

ISBN: 0-904-56-4

The present emphasis in orthodontics on materials and appliances, rather than biology, tends to make practitioners under-estimate the benefits of interceptive orthodontics. Whilst interceptive orthodontics has its limitations there is still a place for it in modern orthodontics.

In each chapter of the book the author aims to present the consensus opinion on a certain topic. At the end of each chapter, and this is new in the 4th edition the author gives a brief summary of studies that, in his opinion, belong to the more robust and respected research work on the subject. Unfortunately, the inclusion criteria that were used for the listing of studies in these 'summaries of evidence' are not mentioned.

The initial sections of the book provide some background information on facial growth and growth prediction, as well as development of the occlusion in relation to the aetiology of malocclusion. Special attention is given to soft tissue morphology function, and maturation. Three chapters that deal with specific situations suitable for interceptive treatment follow these sections. Functional displacements of the mandible, large overjet, crowding and spacing,

and local irregularities are discussed. In chapter 7 space management is considered, including sagittal expansion of the lower arch, serial extractions and elective extraction of different teeth. It is remarkable that sequential slicing of deciduous molars especially in the lower arch is not mentioned at all, while this procedure can solve space problems in the lower exterior region by using the leeway space. The last chapters deal with the clinical examination for interception for the individual patient.

Overall, this is a useful and not too expensive book that provides a good overview of the aetiology, diagnosis and management of those conditions that are manageable by interceptive orthodontic treatment. The book is written in a pleasant relaxed style and has many black and white illustrations. It would find a space on the bookshelves of undergraduate students, as well as general practitioners who are interested in providing good orthodontic care for their young patients.

Anne Marie Kuijpers-Jagtman