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Orthodontics. Current principles & techniques, 4th edition (2005)

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This fourth edition is the long-awaited sequel of its predecessor. The book, which consists of two parts encompassing 28 chapters altogether, has increased by 200 pages and is now in colour. All the chapters have been written by eminent researchers in orthodontics. The book is extensively illustrated with outstanding treatment results and easy to understand tables, diagrams, and clinical images, which clarify the text.

Part 1, which consists of 11 chapters, details diagnosis and treatment planning and occupies just under half of the volume. As with most orthodontic texts it starts with clinical orthodontic diagnosis and includes a number of references. The second chapter describes modern aspects of craniofacial imaging, such as three-dimensional photography, virtual study models, and cone-beam tomography, and no longer refers to the traditional imaging techniques such as plain film localization techniques for impacted or supernumerary teeth, and cephalometry. The European reader may find that the radiation protection guidelines are different on the other side of the Atlantic. There are chapters on genetics, upper airway and cranial morphology, tissue reactions in orthodontics, bone physiology, metabolism, and biomechanics. There is also a chapter on the application of bioengineering to clinical orthodontics, orthodontics for patients with temporomandibular dysfunction, and a short chapter on biomaterials in orthodontics. Statistics are also discussed, as is interceptive guidance of occlusion with an emphasis on diagnosis.

Part 2 of the book, which specializes in orthodontic treatment techniques and modalities, consists of 17 chapters. This part of the book is not subdivided into treating defined classifications of malocclusions, but rather discusses a number of treatment modalities such as functional appliances, treatment in the mixed dentition,

and aspects of fixed appliances such as Tweed-Merrifield Edgewise technique. The European reader may find this chapter very intriguing, as this technique is not widely taught. The chapter on bonding in orthodontics is well written and illustrated. Indirect bonding techniques are discussed in a separate chapter. There is a dedicated section on self-ligation with Speed brackets, while other self-ligation systems are discussed in other chapters. Treatment modalities of fixed appliances in relation to facial aesthetics as well as non-extraction treatment are also covered. There is a short section on non-compliance functional treatment, which rounds off the functional treatment chapter earlier in the book. There are sections on adult interdisciplinary therapy, orthognathic surgery, and craniofacial distraction osteogenesis. The role of the orthodontist in the cleft palate team is also discussed. There is a section on retention and relapse and on clear plastic appliances for retention and tooth movement.

Overall this is an extensive book, trying to cover most aspects of the latest orthodontic developments. As with books of this size, it must be difficult for the editors to omit other significant orthodontic techniques, such as Begg and Tip-Edge. On the other hand some of the chapters could be texts in their own right. Undoubtedly this book is aimed at the specialist for use as a reference as well as for orthodontic specialist trainees. It is probably the best example of how orthodontic knowledge and techniques have increased over the last few years as it appears impossible to cover all aspects of modern orthodontics in any one book. However, the editors must be congratulated for this outstanding work, which will surely be of great interest in the orthodontic world.

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