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Current therapy in orthodontics (2010)

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The rate of technological and scientific advancement in contemporary orthodontics is accelerating. The present book was designed to update clinicians on new knowledge and recent developments in orthodontics. As with any Mosby publication, it is well indexed and richly illustrated; 298 fully coloured figures and 30 tables are used very effectively. No fewer than 42 authors, all experts in their

fields, have contributed to the 396 pages of this book, which is divided into four parts.

Part I details orthodontic diagnosis and treatment. Chapters are dedicated to quality of life as an indicator for treatment need, patient compliance, the non-numeric determination of form and balance in cephalograms, the assessment of occlusal patterns in orthodontic patients, and

the three-dimensional superimposition of cone-beam computed tomographic images for the evaluation of anatomical changes during growth or orthodontic treatment. The section dealing with orthodontic treatment contains a comprehensive and well-referenced chapter on adhesives and bonding, discusses the impact of bracket selection and placement on expressed tooth movement, and challenges popular trends in orthodontic treatment, such as appliance-driven procedures.

The second part of the book focuses on the clinical management of sagittal and vertical discrepancies. Three chapters are dedicated to the treatment of Class II malocclusions. They explain the concept of functional therapy and present treatment strategies to reduce reliance on patient compliance, such as the use of fixed functional appliances and intramaxillary distalization appliances. The chapters on the treatment of vertical discrepancies address aetiology, diagnosis, and treatment of open- and deep-bite malocclusions.

Part III deals with the management of adult and complex cases and occupies more than one-third of the volume. The orthodontic treatment of patients with reduced periodontal attachment is discussed, as well as the management of those with chronic obstructive sleep apnoea. The chapter on biomechanics gives an excellent overview of continuous and segmented archwire mechanics and emphasizes the need to design an individualized biomechanical treatment plan for each patient. It advocates an approach called 'hybrid sectional mechanics', which combines the advantages of both continuous and segmented archwire mechanics to optimize treatment outcomes in complex cases. The chapter on aesthetics in interdisciplinary patients challenges the

traditional treatment planning sequence and shows the striking results that can be achieved when the highest level of clinical care is delivered by several dental disciplines. Three chapters on skeletal anchorage discuss the use of microscrews and miniplates in specific orthodontic situations and describe the surgical procedures involved in their placement.

The final part of the book addresses the applications of biomedicine to orthodontics. It discusses the biological background of the mechanotransduction of orthodontic forces, the process of orthodontic root resorption, and the surgical restoration of oral and craniofacial defects.

The diverse pool of authors not only lends expertise and experience to each topic discussed but also contributes to perceptible differences in style and quality of the treatment results and clinical photographs among the chapters. As stated in the preface, the book was not meant to be a compendium of every aspect of orthodontics—and it is not. It is a selection of topics that have evolved or received increased attention during recent years. However, the book effectively does what it was designed for. It provides access to state-of-the-art concepts in orthodontics, covering both clinical aspects and scientific background. As the book extends standard orthodontic textbooks, it might not be well suited for learners but can be recommended to every general practitioner, senior graduate student, and orthodontic specialist who is looking for a compact update on the latest advances in the field of orthodontics.

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