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## BookReview

### Applications of Orthodontic Mini Implants.

By Jong Suk Lee, Jung Kook Kim, Young-Chel Park and Robert L Vanarsdall, Jr. New Malden: Quintessence Books, 2007 (286pp., £89). ISBN 978-0-86715-465-8.

This a comprehensive textbook covering a wide spectrum of theoretical, biological and clinical aspects of mini-screw implants. It comprises 286 pages of text, diagrams and photographs covering an extensive range of clinical case studies.

The first five chapters deal essentially with aspects related to the mini-screw and its ability to provide a source of bone-supported anchorage, while chapters 6–11 concentrate more on all the clinical issues related to the mini-screw.

Chapter 1 presents a discussion on the evolution of the mini-screw over the last 60 years, incorporating changes in design and changes in materials from stainless steel to vitallium to the current titanium alloys.

Chapters 2 and 3 deal with the concepts of skeletal anchorage covering both the physical and biological issues. The importance of the bone-to-screw interface and the features affecting this interface are discussed with special reference to long-term stability of the mini-screw. A detailed review of the hard

tissue, soft tissue and clinical operator's possible influence on screw failure is presented. The design features of the mini-screw with regard to diameter, length and head configuration are well covered. Critical information on load tolerances is limited by the lack of available data, a value of 200–400g is cited from an unpublished source. Important information regarding higher failure rates in patients 15 years and younger is based on the concept that this may be due to poor bone quality and quantity and to the higher bone turnover rates in younger patients.

Chapters 4 and 5 cover treatment planning, selection of screw type and insertion sites, together with the necessary precautions. The surgical procedures, the required instruments and the protocols necessary for the prevention of root injuries, as well as a section on problems and solutions are well covered.

Chapters 6 and 7 discuss the mechanics and limitations of screw-based anchorage supported by examples of well illustrated clinical cases.

Chapter 8 deals specifically with anterior tooth retraction and chapter 9 with vertical control of the dentition. Well illustrated cases are presented showing examples of both intrusion and extrusion. Control of teeth in the transverse plane is covered in chapter 10.

The final chapter, 11, covers the pre-prosthetic application of mini-screws. In view of the limited anchorage provided by teeth in mutilated dentitions, mini-screws provide a useful source of anchorage as an aid for pre-prosthetic tooth movement.

Overall, this is a useful textbook that provides more than enough information for any clinician considering using mini-screw implants.

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