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Peri-implant infection (2009)

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This book has been written by two implantologists, with contributions from five additional authors. It was originally published in German in 2007 and this edition represents the results of both subsequent updating of the material and English translation. It is very well referenced (with 610 papers cited) and illustrated in terms of diagrams, photomicrographs, radiographs, and clinical photographs. Key statements are helpfully highlighted in purple boxes throughout the text. There are six chapters beginning with an overview of the 'Anatomy of periodontal and peri-implant tissues'. This is a detailed and contemporary resumé of the anatomy and provides a useful version of this topic for orthodontists. The reader is reminded that bone-implant contact does not equate to osseointegration, but rather it only provides the basis for successful implant anklyosis, i.e. clinical resistance to a high shearing force. This is an important detail for orthodontists since the term osseointegration is frequently misused in the orthodontic mini-implant (miniscrew) field. This chapter also highlights that early implant research focused almost entirely on the optimization of osseointegration and then subsequent research aimed to improve integration with the transmucosal soft tissues. It is interesting that orthodontic mini-implant research seems to be mirroring this, with the current emphasis being on primary stability and apparently little research having yet been conducted on the soft tissue interface.

Chapter 2 discusses the roles of periodontal disease, smoking, occlusal overloading, and other aetiological factors in implant failures. Chapter 3 then describes the pathogenesis in terms of the immune response to bacterial peri-implant mucositis and subsequent peri-implantitis. Chapters 4–6 deal with the clinical manifestations, diagnosis, and therapies related to peri-implant infections. In particular, with mini-implants in mind, it is helpful for orthodontists to understand the variable manifestations of soft tissue problems adjacent to fixtures: mucositis, implantitis, and mucosa hyperplasia (which is reversible). However, the fundamental difference for mini-implants (which do not osseointegrate) is that they are more likely to become clinically mobile than have chronic pocket abscess

formation. The descriptions of therapies, especially surgical techniques, are not directly relevant for orthodontists, but it is interesting to note that the adjunctive use of antimicrobial mouthwashes appears to have only a limited beneficial effect compared with physical debridement (or explantation).

This book is aimed at dentists specializing in restorative implants and focuses on the causes and management of long-term dental implant infection (failure). It is surprisingly well priced given its specialized nature and the quality of the text and illustrations. In summary, I think that this book is primarily of relevance to orthodontists as a reference for the subject of long-term hypodontia management and more specifically for those conducting research on orthodontic (osseointegrating) implants and mini-implants. Indeed, it may provide useful suggestions for future research strategies on the interface between mini-implants and the soft tissues and the ideal methods for biofilm control/removal.

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