Popular demand for dental implants as a reliable long-term option to replace missing teeth has risen dramatically. However, situations remain that pose challenges to practitioners and the treatment process. Written by renowned clinicians and supported by cases contributed by expert practitioners, the present volume of the ITI Treatment Guide series highlights the integration and management of peri-implant soft tissues. It discusses soft-tissue management before and during implant placement and during supportive peri-implant therapy and addresses the techniques and materials used for peri-implant soft-tissue augmentation and replacement and for the treatment of peri-implant soft-tissue dehiscences. Volume 12 of the ITI Treatment Guides series offers clinicians a comprehensive overview of various evidence-based techniques and treatment approaches for use in daily practice, with a focus on current techniques and materials. With the desire for dental implant therapy ever escalating, clinicians are faced with the challenge of augmenting deficient natural physiology to provide effective sites for implantation. Implant Site Development helps the clinician decide if, when, and how to create a ridge site amenable to
implantation. This practical book offers solutions to many implant site preservation scenarios, discussing different treatment options, timing, a variety of materials and techniques, and their application to the clinical practice. With a unique integrated clinical approach, Implant Site Development covers a range of site development techniques. Highly illustrated, Implant Site Development presents diagrams and clinical photographs to aid with clinical judgment and will prove useful for any dental professional involved in implant therapy, from general practitioners to prosthodontists, but especially surgeons. This literature-based, yet user-friendly, reference will be indispensable to the novice or veteran clinician. This text is organized into two sections. The first section details the normal microscopic and clinical features of the periodontium, as well as classification, epidemiology, etiology and pathology of periodontal diseases. The second section covers diagnosis and treatment of gingival and periodontal diseases, including four chapters on oral implantology. This edition includes 10 new chapters, including coverage of leukocyte abnormalities; treating aggressive periodontal disease; the biology of peri-implant tissues, and diagnosing and treating peri-implantitis. Effective periodontal and peri-implant therapies are based on the fundamentals: formulation of a correct diagnosis, accurate treatment planning, precision in clinical treatment, and appropriate follow-up. This beautifully illustrated text addresses comprehensive clinical periodontal treatment by detailing the nonsurgical and surgical therapies that can ensure the essential stability of the hard and soft tissues. Emphasis is placed on understanding the long-term behaviors of soft tissue and bone tissue as well as on providing expert clinical treatment to achieve successful long-term results. Biophysical and Chemical Properties of Collagen: Biomedical Applications provides an introduction to the biophysics and chemistry of collagen and its use as a biomedical material in the rapidly changing fields of biomedical device production, tissue engineering and regenerative medicine. Written by experts in the field, this text will be of interest for researchers as well as lecturers and students. This book is a comprehensive guide to Biodentine™, an innovative biocompatible and bioactive material based on pure tricalcium silicate that can permanently replace dentin and can also serve as a temporary enamel substitute. Although Biodentine™ has been widely used across the world for the past decade, this is the first book to be devoted to its properties, interactions with the soft and hard tissues, and its multiple clinical applications. The coverage encompasses applications in primary and permanent teeth, in specialties as diverse as restorative dentistry, endodontics, paediatric dentistry, dental traumatology, and prosthetic dentistry. Biodentine™ application both in vital pulp therapy and endodontic procedures is illustrated and clinical step by step protocols are provided. The book provides a detailed update on Biodentine™ use to preserve the pulp vitality in direct/indirect pulp capping, pulpotomy and irreversible pulpitis treatment. It also details Biodentine™ use for non-vital teeth treatment in indications such as root/furcation perforation
repair, apexification as well as in regenerative endodontic procedures. BiodentineTM: Properties and Clinical Applications will be a rich source of guidance and information for all dentists as well as dental students and academics. Diagnosis and Treatment of Furcation-Involved Teeth offers dental professionals a comprehensive review of the aetiology and diagnosis of furcation defects, including treatment options. Provides a practical manual for the successful diagnosis and treatment of a therapeutic challenge for general dentists and periodontists. Presents illustrative photographs of clinical cases and procedures. Offers a helpful chapter on patient-reported outcomes. Includes a companion website with video clips and case studies. This book gathered numerous experts across many fields to collectively provide information on leading esthetic PRF therapies to expand treatment possibilities. Biofilms are ubiquitous and their presence in industry can lead to production losses. However, nowhere do biofilms impact human health and welfare as much as those that are found contaminating the healthcare environment, surgical instruments, equipment, and medical implantable devices. Approximately 70% of healthcare-associated infections are due to biofilm formation, resulting in increased patient morbidity and mortality. Biofilms formed on medical implants are recalcitrant to antibiotic treatment, which leaves implant removal as the principal treatment option. In this book, we investigate the role of biofilms in breast and dental implant disease and cancer. We include in vitro models for investigating treatment of chronic wounds and disinfectant action against Candida sp. Also included are papers on the most recent strategies for treating biofilm infection ranging from antibiotics incorporated into bone void fillers to antimicrobial peptides and quorum sensing. This book provides an overview of the use of lasers in dentistry today. Featured are soft tissue, hard tissue, and dental materials' applications. Learn how lasers interact with oral tissues; safety standards and regulations; surgical techniques; and clinical applications of argon, CO2, Er:YAG, excimer, Ho:YAG, and Nd:YAG lasers. The aim of this book is to collect within one volume information on hyaluronan. This polysaccharide has received rapid attention for two reasons: it has important regulative functions within cell biology; and it has become a commercially important product because of its use in ophthalmic surgery and treatment of joint disease. A number of other practical applications are also discussed. The book covers various aspects of hyaluronan from the structure and chemistry of the polymer to its metabolism, cell biological interactions, behaviour in pathological processes, and potentially new medical applications. Over the last 20 years, biochemistry and molecular biology have undergone a revolution that has affected our understanding of the oral cavity. Topics in Dental Biochemistry is primarily designed for students of dentistry who need to relate biochemistry and molecular biology to dentally related topics in physiology, nutrition, anatomy, histology, microbiology, and immunology. The book will also be of value for dental professionals, scientists, and practitioners of medicine who are interested in hard
and soft tissue structure and disease. It provides the necessary basic scientific background for a clearer understanding of bone, tooth, saliva, and surrounding soft tissue research and also for an appreciation of how dental caries and periodontal disease might be better diagnosed and controlled in the future. Dentistry was developed to treat dental caries, but since the early 20th century it has increasingly been treating periodontal, traumatic and genetic diseases affecting tooth structure and attachment. Fluoridation is discussed at length. Other methods for controlling dental caries and new or suggested methods for controlling oral hygiene and periodontal disease are also discussed. Now in its sixth edition, Clinical Periodontology and Implant Dentistry is the must-have resource for practitioners specialising in periodontal care and implant dentistry. The chapters have been extensively revised with 40% of the content new to this edition. Maintaining the widely praised two-volume format introduced in the previous edition, the editorial team has once again brought together the world’s top international specialists to share their expertise on all aspects of periodontology, periodontal health and the use of implants in the rehabilitation of the periodontally compromised patient. Seamlessly integrating foundational science, practical clinical protocols, and recent advances in the field, Clinical Periodontology and Implant Dentistry, Sixth Edition enhances its stellar reputation as the cornerstone reference work on periodontology. With contributions from: R. Gruber, Th. Hanser, Ph. Keeve, Ch. Khoury, J. Neugebauer, J. E. Zöller Bone and Soft Tissue Augmentation in Implantology addresses useful methods of bone grafting procedures in implant treatment based on current biologic principles and constitutes a unique reference in this field. The book describes, in over 760 pages and 2837 mostly color illustrations, the different possibilities available to augment the bone volume in width and height. The information presented includes not only the underlying scientific concepts of the different augmentation techniques with autogenous bone, but also the associated soft tissue management, from safe approaches to different possibilities for soft tissue augmentation and papilla reconstruction techniques. The book provides surgeons with a basic understanding of the biologic response to bone grafting procedures. Experienced implantologists will benefit from the in-depth background information, details of high-level surgical techniques, and scientific results, which will enable them to optimize their surgical procedures. Each chapter offers a wealth of information on the specific topic covered, with much attention given to the scientific concepts behind each one. Extensive case reports with step-by-step documentation allow readers to gain an impression of what is possible today in the 3D reconstruction procedures of the alveolar crest. Important criteria for success are presented as well as possible complications and their treatment. Bone and Soft Tissue Augmentation in
Implantology is a must-read for every implantologist, oral and maxillofacial surgeon, and any dentist interested in surgery. The long-term success of periodontal therapy is dependent on proper diagnosis and removal of subgingival tooth-borne accretions in the form of calculus and bacteria. From a clinical perspective, better visualization during the diagnostic and therapeutic phases has been shown to yield better results compared to traditional approaches. Minimally Invasive Periodontal Therapy evaluates the advantages of using minimal invasive techniques, the technologies available for enhancing visualization during minimally invasive therapy, and step-by-step illustrates the clinical use of each technique. Each chapter addresses the advantages and disadvantages of minimally invasive therapies, rationale for the approach, and the advantages and limitations of each of the current methods of improving visualization. The chapters then provide an evidence-based review of the technologies and procedures, and end with case studies for each visualization procedure, featuring clinical photographs. Discover the latest edition of the cornerstone reference on periodontology and implant dentistry that combines scholarship and science with practical clinical instruction. The Seventh Edition of Lindhe's Clinical Periodontology and Implant Dentistry brings together a distinguished team of periodontal specialists and academics who deliver another must-have resource for students, researchers, and practitioners specializing in periodontal care and implant dentistry. Seamlessly integrating the foundational science behind periodontology with practical clinical protocols in two comprehensive volumes, the chapters cover anatomy, microbiology, occlusion trauma, pathology, tissue regeneration, treatment planning protocols, infection control, reconstructive therapy, occlusal and prosthetic therapy, and more. The Seventh Edition of Lindhe's Clinical Periodontology and Implant Dentistry: Provides an introduction to anatomy, including periodontal tissues, the edentulous ridge, the mucosa at teeth and implants, and osseointegration Discusses the epidemiology of periodontal and peri-implant diseases Explores the microbiology, including dental biofilms and calculus, periodontal infections, peri-implant infections, the pathogenesis of gingivitis and periodontitis, and the genetic susceptibility to periodontal disease Includes the latest peri- and peri-implant disease classifications Contains updated evidence-based preventive and treatment modalities for the treatment of periodontal and peri-implant diseases Features the latest evidence-based therapeutic alternatives on the use of dental implants to rehabilitate the lost dentition Perfect for postgraduate dental students, researchers, and practitioners specializing in periodontal care and implant dentistry, Lindhe's Clinical Periodontology and Implant Dentistry continues to be the cornerstone reference work on periodontology. They assert that regeneration can be achieved only by proper understanding of all cellular, tissue, and clinical components, and they provide the foundation necessary for this understanding. Comprehensive issue on adolescent oral health which covers dental needs assessment and access to care; psychosocial behavior patterns; prevention strategies for dental caries; prevention
strategies for periodontal diseases and soft tissue lesions; developmental occlusion, orthodontic interventions, and orthognathic surgery; restorative, esthetic and replacement dentistry; dental trauma dental management for adolescent athletes; and common medications for adolescent dental patients. Orthodontics is a fast developing science as well as the field of medicine in general. The attempt of this book is to propose new possibilities and new ways of thinking about Orthodontics beside the ones presented in established and outstanding publications available elsewhere. Some of the presented chapters transmit basic information, other clinical experiences and further offer even a window to the future. In the hands of the reader this book could provide an useful tool for the exploration of the application of information, knowledge and belief to some orthodontic topics and questions. This book presents a multidisciplinary evidence-based approach to the management of teeth with lesions of endodontic-periodontal origin. The book opens by addressing the etiology and classification of endodontic-periodontal lesions, and demonstrates its relevance to the daily practice. Specific endodontic, prosthetic, and periodontal considerations that should be incorporated into clinical decision making and treatment planning are then discussed in detail. Subsequent chapters describe modern clinical procedures in periodontal regenerative treatment, describe vertical root fractures as an endodontic-periodontal lesion, examine treatment alternatives following the extraction of teeth with endodontic-periodontal lesions, and discuss possible biological complications in implant supported oral rehabilitation. Finally, a summary chapter considers the integration of clinical factors and patient values into clinical decision making. The text is accompanied by many figures presenting informative clinical examples. The authors are internationally renowned scientists and clinicians from the specialties of Endodontology, Periodontology, and Oral Rehabilitation. Owing to its multidisciplinary and comprehensive nature, the book will be relevant and interesting to the entire dental community. Light Therapy in Dentistry: Efficacy, Uses and Limitations is a scientific puzzle of new information for laser applications in dentistry and their translation to medicine. It describes a symphony of essential information and orchestration of therapeutic concepts presenting the jewels of learning to clinicians, researchers, and specialized individuals who want to know more about laser applications in dental sciences. This special issue entitled “Soft and hard tissue regeneration” will cover both periodontal and implant therapies. Regenerative periodontal treatment goal is to restore functional periodontal support offering a valuable treatment alternative even for teeth with large periodontal destruction, which may be successfully treated and maintained in health for long periods. In most cases where teeth are extracted for periodontal reasons, implant therapy will demand large bone augmentation procedures. Lack of sufficient bone volume may prevent placement of dental implants. In extreme cases, large bone reconstruction is indispensable before implant placement can be performed. Although, most bone grafts are only able to fill and maintain a
space, where bone regeneration can occur ("osseoconductive"), the ideal bone graft will also promote osseous regeneration ("osseoinductive"). Several bone augmentation procedures have been described, each, presenting advantages and shortcomings. Success of bone augmentation procedures depends on the presence of bone forming cells, primary wound closure over the augmented area, space creation and maintenance where bone can grow and proper angiogenesis of the grafted area. Factors that influence the choice of the surgical technique are the estimated duration of surgical procedure, its complexity, cost, total estimated length of procedure until the final rehabilitations may be installed and the surgeons’ experience. This special issue will have a definite clinical orientation, and be entirely dedicated to soft and hard tissue regenerative treatment alternatives, both in periodontal and implant therapy, discussing their rationale, indications and clinical procedures. Internationally renowned leading researchers and clinicians will contribute with articles in their field of expertise. The first book devoted exclusively to the subject, Platelet Rich Fibrin in Regenerative Dentistry offers comprehensive, evidence-based coverage of the biological basis and clinical applications of PRF in dentistry. Co-edited by a leading researcher in tissue regeneration and the inventor of the PRF technique, it brings together original contributions from expert international researchers and clinicians. Chapters cover the biological foundation of PRF before addressing specific uses of the technology within clinical dentistry. Topics describe the use of PRF in many dental applications, including extraction socket management, sinus lifting procedures, root coverage, periodontal regeneration, soft tissue healing around implants, guided bone regeneration, and facial esthetics. The text is supplemented with color photographs and explanatory illustrations throughout. Platelet Rich Fibrin in Regenerative Dentistry: Biological Background and Clinical Indications is an indispensable professional resource for periodontists, oral surgeons and oral and maxillofacial surgeons, as well as general dentists who use PRF or are interested in introducing it into their practices. It is also an excellent reference for undergraduate and postgraduate dental students. In this issue of Dental Clinics, guest editors Alpdogan Kantarci, Andreas Stavropoulos, and Anton Sculean bring their considerable expertise to the topic of Biologics and Biology-based Regenerative Treatment Approaches in Periodontics. Provides in-depth, clinical reviews on the latest updates in Biologics and Biology-based Regenerative Treatment Approaches in Periodontics, providing actionable insights for clinical practice. Presents the latest information on this timely, focused topic under the leadership of experienced editors in the field; Authors synthesize and distill the latest research and practice guidelines to create these timely topic-based reviews. This clinically oriented book covers all aspects of the evidence-based decision making process in multidisciplinary management of the natural dentition. The book opens by clarifying the principles of evidence-based decision making and explaining how these principles should be applied in daily practice. Individual chapters then focus specifically,
and in detail, on endodontic, periodontal, and prosthetic considerations, identifying aspects that need to be integrated into decision making and treatment planning. Evidence-based decision making with regard to preservation of the natural tooth versus extraction and implant placement is then discussed, and a concluding chapter examines likely future trends in dentistry and how they may affect clinical decision making. The authors include leading endodontists, periodontists, and prosthodontists. Given the multidisciplinary and comprehensive nature of the book, it will be relevant and interesting to the entire dental community. This text provides the clinician with an overview on the use of regenerative techniques in periodontology. The chapters are designed to cover the most important aspects related to anatomy, wound healing, regenerative materials, surgical techniques, and clinical applications as related to regenerative procedures.

"Atlas presenting surgical and nonsurgical methods to treat intraosseous defects, with a focus on the single-flap approach, including indications and contraindications for treating defects with each method and detailed descriptions of the steps required for each procedure"--This book is an up-to-date reference that provides detailed guidance on how to diagnose and manage the soft and hard tissue complications that may be associated with a functioning dental implant placement, such as peri-implant mucositis, soft tissue loss, and peri-implantitis. Treatment options for each complication are described and illustrated step by step and carefully selected cases are presented to further explain the individual stages in management and to highlight key learning points. Practical advice is offered on all aspects of diagnosis, and information is also presented on the definition and etiology of the various complications. The book is in an easy-to-read format and includes a review of the latest literature on the topic. Implant dentistry has changed and enhanced significantly since the introduction of osseointegration concept with dental implants. Because the benefits of therapy became apparent, implant treatment earned a widespread acceptance. Therefore, the need for dental implants has caused a rapid expansion of the market worldwide. Dental implantology continues to excel with the developments of new surgical and prostodontic techniques, and armamentarium. The purpose of this book named Current Concepts in Dental Implantology is to present a novel resource for dentists who want to replace missing teeth with dental implants. It is a carefully organized book, which blends basic science, clinical experience, and current and future concepts. This book includes ten chapters and our aim is to provide a valuable source for dental students, post-graduate residents and clinicians who want to know more about dental implants. This handbook describes several current trends in the development of bioceramics and biocomposites for clinical use in the repair, remodelling, and regeneration of bone tissue. Comprehensive coverage of these materials allows fundamental aspects of the science and engineering to be seen in close relation to the clinical performance of dental and orthopaedic implants. Bioceramics and biocomposites appear to be the most dynamic area of materials development for both tissue engineering and implantable
medical devices. Almost all medical specialties will continue to benefit from these developments, but especially dentistry and orthopaedics. In this Handbook, leading researchers describe the use of bionanomaterials to create new functionalities when interfaced with biological molecules or structures. Also described are technologies for bioceramics and biocomposites processing in order to fabricate medical devices for clinical use. Another important section of the book is dedicated to tissue regeneration with development of new matrices. A targeted or personalized treatment device reduces drug consumption and treatment expenses, resulting in benefits to the patient and cost reductions for public health systems. This authoritative reference on the state-of-the-art in the development and use of bioceramics and biocomposites can also serve as the basis of instructional course lectures for audiences ranging from advanced undergraduate students to post-graduates in materials science and engineering and biomedical engineering.

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