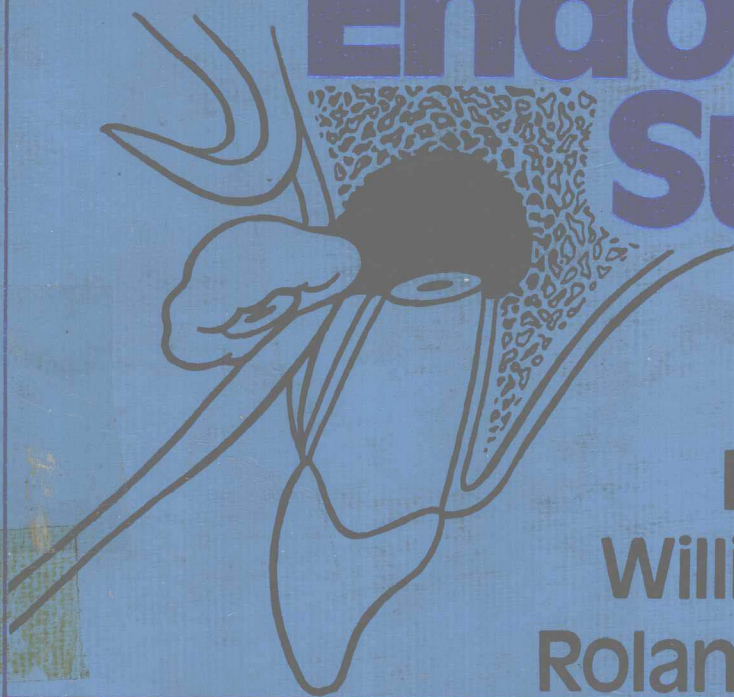




Endodontic Surgery



Donald E. Arens
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Editors

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The authors and publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new or infrequently employed drug.

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with 12 contributors

To Bobbi, Ed, Pam, Pat, and Kris, I express an unending love and devotion for understanding and supporting a Scorpio ambition.

Donald A. Arens

To my wife, Sacha, for her love, support, and prayers, and to my children, Alicia, Ben, and Katie, for the many nights when Daddy was busy or away

William Ray Adams

To my wife, Concha, and to our children, to whom I am endlessly grateful for tolerating my long hours of absence

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Surgical endodontic procedures usually encompass incision and drainage, trephination, apical curettage, reverse seals, replantation, transplantation, and endosseus implants. Anthropologists have long demonstrated that most of these procedures were already being done prior to and during the Pharonic period in the Middle East as well as among the more primitive societies of South America.

Historically, dental procedures were essentially employed for the relief of pain and, in the more primitive cultures of the Africans, Mayans, Atacames, and Asiatics, for the additional purpose of decoration.

Tagger (1967), in his review of the past and present status of endodontics, observed that root canal therapy has its roots in antiquity. Archigenes in the first century A.D. was credited by Kalifah (1947) with having used a trephine to obtain drainage from the pulp cavity. Thorwald (1962) documented the frequency of dental abscesses among the ancient Egyptians and illustrated a mandible in which two holes had been bored to drain the abscesses.

Saville (1913), in the *American Anthropologist*, reported the find in Ecuador of a skull with a successful transplantation of a lateral incisor in the socket of a central incisor. There was another example of a replantation found in an excavation of Copan in early 1892. The article quotes from Dr. Andrews:

In the lower jaw of the skeleton was found the most interesting curiosity in the whole collection of dentists—a lower incisor had been carved from some dark stone, and which had been implanted to take the place of one that had been lost. The tartar would seem to show that it had been worn for some time during life. This implantation antedates Dr. Younger's experiment by some 1500 years.

The English artist Thomas Rowlandson (1756–1827) produced an etching titled “Transplantation of Teeth,” which illustrated a scene of a dentist removing a tooth from a humble donor for a member of the aristocracy (Pindborg JJ, Marvitz L: *The Dentist in Art*. Chicago, Quadrangle Books, Inc., 1960).

Although endodontic procedures have been accomplished for over a century, it has been within the past 35 years that the American Association of Endodontists was formed and stimulated a resurgence of interest in this field. In 1963 the House of Delegates of the American Dental Association gave its approval to endodontics as a special area of

Foreword

dental practice; since then there has been a dramatic expansion of interest in endodontics by both the profession and the public.

There is a universal concensus that conservative (nonsurgical) endodontic procedures will resolve the vast majority of endodontic problems. In those special instances in which conservative therapy cannot resolve the problem, surgical intervention may be the extension of therapy necessary to produce a predictable successful result. We can no longer accept enthusiasm, expediency, and empiricism as a synonym or substitute for knowledge, skill, and competence.

Jacob B. Freedland, D.D.S.
Charlotte, North Carolina

The idea for a book devoted exclusively to endodontic surgery was conceived when I began teaching the subject to graduate students. I soon discovered that most information available on endodontic surgery was either written by oral surgeons with limited endodontic backgrounds or was included as a chapter in standard endodontic texts as a mere courtesy for the sake of completeness.

Endodontic surgery is officially recognized as a *bona fide* specialty that has assumed an integral role in the practice of dentistry. This book acknowledges the importance of these surgical techniques in the treatment of teeth that are in danger of being extracted. In this era of technology, such procedures should be recognized as precise treatment that can be implemented in dental practice, rather than as techniques employed only by specialists as a last resort.

From the beginning, I realized that the subject was best explained graphically. Using the artistic talents of Dr. Rolando A. DeCastro, it has been possible to project the necessary images through illustrations that represent and clarify the actual procedures. By emphasizing the visual aspects of endodontic surgery, the book not only has greater appeal to students and practitioners less familiar with the special surgical techniques, but also serves as a review for endodontic surgeons as well.

I also recognized the value of joint effort in developing a book that would be worthy of the attention that endodontic surgery deserved. Thus, my relationship with Dr. William R. Adams was conceived. Self-criticism can be difficult and ineffective—the lack of objectivity often results in a lack of constructive suggestions. The mutual evaluation and sharing of information, the changes agreed upon during the editing process, and the molding together of philosophical differences combined to contribute to the overall quality of the end result.

Our intention was to cover the aspects of when and how endodontic surgery should be performed and also to include the “whys, wherefores, and whatever” of this service. Contributing authors have drawn upon their own clinical expertise and experience to ensure a realistic rather than a theoretical approach to the subject. Thus, we have attempted to provide the reader with a single volume that covers all of the major aspects of endodontic surgery including indications, contraindications, instrumentation, techniques, precautions,

Preface

complications, and preoperative and postoperative care.

It is our sincere hope that *Endodontic Surgery* will fulfill its objective—to assist in the management of teeth being considered for extraction. The combination of knowledge and sound clinical judgment, which can be enhanced by the use of the material contained in this book, can improve the quality of patient care by incorporating surgical endodontics into the general treatment plan for dental patients.

Donald E. Arens, D.D.S., M.S.D.

The idea for this book was conceived with encouragement from Dr. Jacob Freedland, who so graciously prepared the Foreword, and with inspiration from Dr. Franklin Weine to teach by simplified writing. It would be impossible to name all the people who have in some way assisted in the production of *Endodontic Surgery*; however, certain individuals must be acknowledged and thanked for their contributions.

We are indebted to the many contributing authors who provided factual, detailed, and well-written manuscripts. These people, though busy in practice and education, took the time to present highly specialized material in a concise and interesting manner.

The staff members and facilities of the Indiana University, especially the Endodontic Department, contributed greatly to the realization of this book. Dean McDonald must be given thanks for both his personal and administrative interest. Richard Scott, Mike Holloran, Alana Fears, and Mark Dirlam of the Illustrations Department, and Isabelle Ezzell of the Duplications Department, expertly assisted in providing superb artwork. Our colleagues Drs. Hine, Kafrawy, Burns, Martin, Winkler, Gerstein, Compton, Flatley, Marosky, Rich, Redish, Poland, Van Tile, Newton, and Kirchoff provided valuable coaching throughout the entire production.

Professor Paul Barton deserves particular acknowledgment and appreciation for lending his journalistic capabilities toward the readability of the book. Annette Reed, Kathleen Murphy, Joann Duvall, Jo Plunkett, Elaine Galvin, Bobbi Arens, and Kristi Arens spent many tiring hours typing and retyping; not a minute went unappreciated. For their understanding, our gratitude is also extended to office staff members Kelly, Cindy, and Helen.

For those who have gone unmentioned, we offer sincere thanks. We hope you will enjoy the fruits of our labor.

Finally, we thank God for giving us the strength and courage not only to begin the endeavor, but also to complete the dream.

Acknowledgments

Contributors	xi
<i>Jacob B. Freedland</i> /Foreword	xiii
Preface	xv
Acknowledgments	xvii



Considerations and Indications for Endodontic Surgery	1
--	---



Medical Considerations and Contraindications	15
--	----



Local Considerations and Contraindications	31
--	----



Pathways of Infection

57

Periapical Pathoses of Endodontic
Importance

71



Preoperative and Postoperative Therapeutics

81



Presurgical Preparation

91



Endodontic Surgery

109



Midsurgery Endodontics

143



Endodontic Emergency Care 169



Root Resection and Hemisection Procedures 189



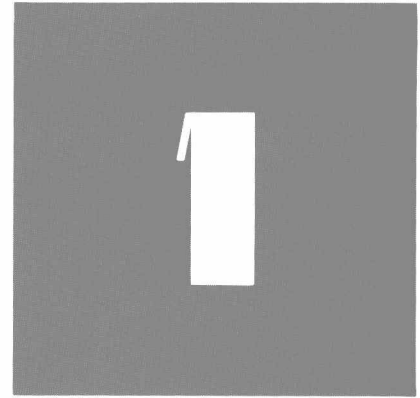
Innovative Surgical Approaches 205



Postoperative Instructions 227

Index 233

Considerations and Indications for Endodontic Surgery



Samuel S Patterson