Preface to the Second Edition

Seventeen years have passed since the publication of the first edition of this monograph on endoscopic sinus surgery. The technique was fairly new for the rhinologic community at that time, and it was partly welcomed but partly rejected by many as dangerous—if not hazardous—and as an insufficiently solid method. In many instances criticism focused on what was thought to be too radical an exenteration of the sinuses, resulting in mucosal atrophy called ozema. This was a striking misunderstanding of our concept of combining a minimally invasive approach with a mucosa-preserving technique of resection. Within a few years this adverse misinterpretation was resolved, and endoscopic sinus surgery became popular. Today, it is the worldwide method of choice for the surgical treatment of chronic rhinosinusitis. During recent years other indications, as already mentioned in our first edition, such as trauma, malformation, and neoplasia, were also brought within the range of endoscopic therapy.

The desire of Thieme Publishers for an update of this textbook in the form of a revised edition was, therefore, logical, but completion of the task was delayed over several years by the authors’ absorption with writing a similar monograph on otosurgery. This enforced interlude proved fortunate, however, insofar as it meant that a number of recent advances in endoscopic sinus surgery could be included.

Such fundamentals as the concepts of the pathophysiology of rhinosinusitis and its surgical therapy, the description of standard interventions and their modifications for the management of inflammatory complications, trauma, malformation, and neoplasia have been revised and completed. The arrangement of related chapters was accordingly altered, and new sections have been incorporated like those on transcranial endoscopy and revisional surgery. This accumulation of new material necessitated a marked change of the layout of the contents. In addition, the acquisition of many new images and schematic drawings has somewhat transformed the old textbook into a kind of illustrated atlas.

Along the same lines, particular sinusotomies are described in the order of the usual course of subsequent partial steps of complex operations, as during a pansinus operation in our department. A supraturbinale nasoantrotomy, for instance, always follows a preceding ethmoidectomy.

Again, as in the first edition, the emphasis is laid on endoscopic procedures because of their advantage of manipulation in angled directions. The use of a binocular microscope is stressed only where this tool offers substantial help. A similar restriction is observed concerning external approaches, which are still justified for certain indications. These are mentioned in connection with difficult-to-reach targets and with combined neuro-rhino-surgical interventions. I emphasize that my intention was not to describe anything that is feasible or has ever been reported in the literature, but to describe specifically what has proved valuable in the experience of the Erlangen ENT service. References to the literature are sparse and personal opinions, choices, and experiences are integrated into the technical instructions to perhaps a higher degree than usual.

I have to apologize for three features. First, the use of popular but not strictly correct terms has been retained in the interest of ease of communication. One speaks, for example, of three turbinates, though there exists only one “os turbinale,” that is the inferior turbinate. Also the suffix “-ectomy” is slightly incorrect usage for a mere resection. Secondly, for lack of the originals, many images had to be copied from the book of the first edition, which has reduced their brilliance to a some degree. And, finally, some repetition is unavoidable to allow complete descriptions in separate specialized sections.

I was more than happy to gain Dr. Heinrich Iro—Professor of Otorhinolaryngology and my successor in the chair at the University of Erlangen-Nuremberg and also head of the ENT Department in Erlangen—as a prestigious collaborator. His generous disposal of the modern facilities of his service in Erlangen has substantially supported the production of this new edition. Separate contributions from associated consultants with personal expertise have been included. I am grateful to Docent Dr. Holger Greeß from the Department of Radiology for his addition and explanation of new images, and to Drs. Torsten Birkholz and Martin Marsch from the Department of Anesthesiology for renewing the sections on local and general anesthesia. Also the excellent description, taken over from the first edition, of a sagittal dissection of the lateral nasal wall in eight steps by Werner Hosemann, today Professor of Otorhinolaryngology at the University of Greifswald, must be gratefully acknowledged. Professor Man-
fred Weidenbecher’s sketch of endoscopic dacrystocysto-rhinostomy has been slightly revised and updated.

Younger collaborators have helped to provide new data and new photographs for illustration. In this connection, thanks must be given to Drs. Alessandro Bozzato and Klaus Bumm. The latter has, together with Dr. Jochen Wurm, also submitted some remarks on computer-assisted surgery and navigation in the chapter on the instrumentarium of endoscopic sinus surgery.

Gratitude must be expressed to Mrs. Maria Ursprung, the librarian of the ENT Department in Erlangen, for the procurement of related literature, and also to Mrs. Mechthild Gerdemann, who, as a tireless companion, carefully prepared the manuscript. Particular appreciation is owed to Mrs. Gundula Bochmann’s assistance in identifying and digitizing innumerable endophotographs.

I am deeply indebted to both Dr. Clifford Bergman, Executive Editor of Thieme Publishers Stuttgart, who insisted on a new reformed edition of this monograph, and to Stephan Konnry, Editor, who has continuously encouraged the author and undertook the burden of realizing a handsome monograph with the high quality typical of a Thieme product.

Finally, respect and gratitude are proffered to the many patients who have trusted themselves to the recommendation of the techniques described and have allowed publication of their outcomes and photographs.

Malte Erik Wigand
Foreword to the First Edition

This is a book that has been eagerly awaited by many otolaryngologists. It is a comprehensive and beautifully illustrated work by one of the recognized pioneers and leading experts in this field. Professor Wigand carefully documents the changes which have occurred in our concepts regarding the pathogenic mechanisms and treatment of chronic sinusitis. The difficult regional anatomy is presented in an organized fashion with sections on endoscopic, radiologic, and cadaver anatomy. Each section is meticulously illustrated.

In addition to presenting both the anteroposterior and posteroanterior surgical approaches, Professor Wigand discusses endoscopic surgery for lesions of the anterior skull base, tumors, and dacyrocystorhinostomy. He highlights the importance of careful endoscopic follow-up and postoperative care when surgery is performed for chronic inflammatory disease. He also details the results obtained in over 10 years experience at the Erlangen University Clinic.

Some years ago I had the opportunity to visit Professor Wigand and to scrub with him in the operating room. As soon as he began the first case, it was obvious that I was in the presence of a master. As I have gotten to know him better, my initial observation has been reinforced. He approached that first case with meticulous atraumatic technique and clear knowledge of the anatomy, and maintained excellent hemostasis throughout. He has written this book with the same attention to detail. However, perhaps more importantly, he brings to his book a wealth of personal experience, the salient points of which are carefully elucidated in this writing. The advent of this book is a significant milestone in the field of the sinus surgery.

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Preface to the First Edition

“To be successful, intranasal operations must be so designed as to restore the normal physiological function of the nose. It is impossible with impunity to operate upon the interior and on the sinuses as though they were boxes.”

Eleven years ago we gave our first report of the advantages of endoscopy in intranasal surgery (Wigand and Steiner 1977). Now we feel able to produce a comprehensive account of this theme. This technique was originally thought to be merely a modification of the long-established procedures for the treatment of inflammations of the paranasal sinuses, but this view had to be rapidly adapted to changing views of the pathological and regenerative processes of the respiratory mucosa. The established surgical principle “where there is pus let it out” is inadequate for this complex system of rigid epithelial surfaces with a highly organized self-cleansing system. Understanding of this system, of the importance of the mucociliary transport system discovered in the 1930s by Anderson C. Hilding and so beautifully illustrated in recent years with endoscopic films by Messerklinger and his colleagues, and adaption to the many new concepts demanded time and scientific proof.

Experience has justified our initial optimism that even the most severely inflamed hyperplastic mucosa could recover after restoration of ventilation and drainage, and this has led to a general decline in radical surgery. Hosemann has shown that the concept of complete elimination of mucosa thought to be irreversibly damaged is no longer tenable. Furthermore, the good results of tympanoplasty for infections of the middle ear have supported our confidence in a similar resolution of the chronically inflamed air cells of the anterior skull, and have shown that the concept of a constitutionally determined biological mucosal inferiority (Wittmaack) is no longer valid. Nonetheless many interactions between micro-anatomy and the local immune responses and healing processes of the mucosa remain unexplained. It is difficult in the midst of continuing research to declare a technique “ready” for a book. It is clear, however, that this new method must now be propagated and taught, and we as authors must accept the fact that criticisms, corrections, and further developments will be made by others.

We have deliberately avoided writing a surgical atlas. Good surgical results demand an understanding of physiological and surgical anatomy, experience in diagnosis and surgical skill. Therefore the chapter on operative technique is only a limited part of the book, and perhaps not the most essential. Neither is this book intended as a compendium of all known operations on the nasal and paranasal sinuses, but is restricted to those procedures which have become established and taught at the Erlangen Clinic. Concentration on personally proven methods imposes some limitations, but also guarantees wide application and reliability. A good example of this is the personal modification of septal correction. This monograph is not intended as a didactic operative atlas, but rather a handbook based on the personal views and experiences of the author. For this reason the very extensive literature on intranasal surgery of the paranasal sinuses is only referred to sporadically, and many techniques are not mentioned.

Despite numerous publications from many centers, intranasal endoscopy in the surgical management of chronic sinusitis remains widely unknown and neglected, probably because the nasal surgeon does not feel at ease working in a delicate anatomical region through narrow access. Even until recent times intranasal ethmoidal surgery has been regarded as being fraught with complications, including severe hemorrhage, blindness, and intracranial infection. It must be emphasized that these fears are much less with experienced endoscopic nasal surgeons. If the jaws of the instrument can no longer be seen by the naked eye, and working distances and the direction of dissection are difficult to estimate, then naturally the procedure is unsafe. Safe dissection demands thorough study of endoscopic anatomy, and practice of endoscopic manipulations with both hands. It is hoped that the results given in Chapter 7 will be proof of this. The last section of the chapter on operative techniques shows that the range of indications has been extended to include surgery of the anterior base of the skull, and of obstructed lacrimal ducts, as described by Professor Dr. M. Weidenbecher.

A wide range of illustrations is necessary to demonstrate all these procedures. Dr. Hosemann has been particularly helpful with the organization of the material and recording of the operative steps on practice models. I am also very grateful to my colleagues Dr. Burlein, Dr. Kachlik, Dr. Riemann, and Herr Gerard for taking the endoscopic
pictures, and for other photographs. I am very grateful to Herr M. Jauch of Richard Wolf (Kittlingen) for a series of diagrams to illustrate the use of the instruments.

Not all the operative steps could be illustrated on one specimen, so the figures had to be taken from various dissections. Since only one side of the nose is presented to give a better insight into endoscopic anatomy, many original figures had to be transposed.

I am particularly grateful to Professor Dr. Brandl, and his many colleagues of the Institute of Anesthesiology (Director, Professor Dr. E. Ruegheimer) of the University of Erlangen-Nuremberg for their contributions to general anesthesia for this form of surgery, for their patience and understanding and for providing a bloodless field.

I wish to thank my former colleague Professor Dr. W. Steiner, now Director of the Department of ORL at the University in Goettingen, for his thoughtful and practical support in the early phase of our joint venture into this previously unknown field Lang, Director of the Anatomical Institute of the University of Wuerzburg, and to Dr. M. P. Jaumann of Goeppingen for the loan of anatomical and endoscopic illustrations.

I would like to record my thanks to my secretary Karin Sippel for skilled assistance in the revision of the manuscript under difficult circumstances; sadly she died in July 1988.

Our librarian Beate Broghammer has worked tirelessly and carefully an accumulating the references, and on the input of data for the index as outlined by Dr. Hosemann. I wish to express my sincere gratitude to her, both for the present work and for help with papers and courses over many years.

I am very grateful to my wife Monika Christina whose careful reading has eliminated many unclear points from the next, and who has compiled the index.

Finally I wish to express my thanks to Dr. med. L.C.G. Hauff of Georg Thieme for his untiring encouragement to write this monograph, and to Herr W. Tannert for the high quality which is characteristic of this publishing house.

Erlangen, Spring 1988

Malte Erik Wigand