

FACIAL INJURIES

Third Edition



Richard Carlton Schultz

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*To Experience:
the most constructive but unforgiving element in learning to
treat facial injuries.*

Man's face is his single most distinguishing physical characteristic. It is at once the key to his identity and his primary means of communicating both thought and emotion.

Acknowledging these important functions of the face, modern society has come to place a premium on its preservation.

R.C.S.

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FOREWORD

The importance of comprehensive management of facial injuries cannot be overemphasized. With the increasing awareness of facial trauma resulting from vehicle accidents and personal assault, the importance of establishing a precise diagnosis of both soft tissue and bony injury as well as initiating the appropriate management has become paramount. The majority of these injuries involve young people in the productive phases of their lives and their facial appearance may be of extreme importance to their employment or personal confidence.

This third edition of Dr. Richard Carlton Schultz's book addresses the problems of management of facial injuries in a logical, systematic fashion. He emphasizes the anatomic complexity of facial bones and the potential difficulty in early diagnosis of facial fractures when the structural deformity is masked by soft tissue swelling. His chapter on the mechanisms of injury is extremely important. It provides insight that enables the reader to anticipate potential structural injury commonly associated with the mechanics of the trauma. Dr. Schultz properly emphasizes the importance of treating the facial trauma victim as a whole patient and warns against over concern with the obvious facial deformity initially unless airway obstruction is present. Shock and internal injuries still take management precedence over obvious facial deformity and these principles are well presented.

Not being able to recognize subtle injuries to the facial region often results in a plethora of diagnostic tests. New diagnostic modalities offering better visualization of the facial bones that have been difficult to analyze by standard radiologic techniques are discussed. This book presents an excellent diagnostic protocol, allowing the reader to make logical selection of diagnostic tests in the proper sequence.

Multiple approaches to the management of specific facial injuries are presented with each related to timing, complexity, and comprehensiveness of outcome so that the surgeon can make an appropriate selection. Dr. Schultz addresses the issue of when special skills are required for the repair of both soft tissue injuries as well as complex facial fractures. The importance of accurate and complete diagnosis, planning and the appropriate reconstructive surgery is extremely well presented. Therefore, this text should be of interest both to those seeing the patient first in the immediate postinjury situation as well as the experienced surgeon involved in the reconstructive phase of the patient's care.

The last chapter, which deals with the medical/legal problems of facial injuries, remains an important issue for the entire medical profession. Clearly, any damage to the face may result in potential psychological or economic loss to the victim and the patient's surgeon should be well informed regarding po-

tential subsequent medical/legal involvement. Dr. Schultz has concisely outlined the various aspects of this involvement and provided suggestions based on his experience. Trauma victims have a high frequency of litigation proceedings. Although this is ordinarily directed against the trauma offender, the medical/surgical treatment team is often included in the litigation process and for this reason this concluding chapter is invaluable.

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PREFACE TO THE FIRST EDITION

Facial injuries deserve a special kind of attention, and the art of treating them is almost a separate surgical entity. Unfortunately, the great number of patients with facial injuries far exceeds the availability of plastic surgeons to care for them. Hence, this book has been conceived as a sort of primer for other physicians who, by choice or singular circumstance, provide a great portion of this care.

The techniques of diagnosis and treatment presented here, while customarily learned through training and experience, may be applied by any physician who understands the principles involved. To this end, the book has been kept brief in text and more generous in illustrations. References, credits, and historical information have been purposely omitted in an effort to keep the printed word always germane to the subject. It is not intended that this work be exhaustive or encyclopedic, but rather that it deal with the classification, description, and basic management of facial injuries commonly encountered in our society.

Much of the content is not original; hopefully, it presents concisely what the author has tried and found to be most simple and effective in dealing with facial injuries. Many good alternative procedures, or variations of techniques, have been omitted to avoid confusion and to keep the text brief. Relatively more detail has been presented in those instances in which the subject seems deserving of particular emphasis or the available literature is not sufficiently explicit.

Because of the high incidence of medicolegal involvement of patients treated for facial injuries, a brief guide to the physician's participation in the various aspects of personal injury litigation concludes the book.

Although this book has been written primarily as a surgical guide to facial injuries, it is the author's hope that the content is organized sufficiently well so that anyone having a professional interest in this demanding subject will find something of value herein.

Richard Carlton Schultz, M.D.

PREFACE TO THE SECOND EDITION

Since I wrote the first edition of *Facial Injuries*, significant changes have occurred in the practice of medicine generally and in the delivery of emergency care specifically. During the past few years, we have witnessed the birth of the specialty of emergency medicine and a resurgence of the specialty of family practice. The training programs and certifying boards of both groups are striving for a high quality of care for the injured patient and seem to be distinctly aware of the special problems involved in the management of patients with facial injuries. Thus, in addition to the surgical specialists with a continuing interest in this field, there are now two groups of primary care physicians who are requiring of themselves a high degree of proficiency in the treatment of facial injuries.

Coincidental with this is the sudden, precipitous rise in the problems of medical liability for all physicians. Indices of patient expectation and patient dissatisfaction have risen to near-crisis levels. As the face is so obviously and relentlessly displayed, and a premium value is placed on the preservation of both its appearance and its function, this subject takes on extraordinary importance for a large number of physicians. These various factors prompted me to expand the book to include new chapters on "Animal Bites," "Gunshot Wounds," "Facial Trauma in Children," and "Reconstruction of Facial Deformities with Alloplastic Materials." Chapters from the first edition have also been expanded and updated.

As with the original edition, I have purposely chosen not to include references to previous literature. I have done this largely because the book stems from my personal experience, but also to keep it brief. Also in common with the first edition, the material presented is not intended to be exhaustive or encyclopedic, but, hopefully, sufficiently explicit and organized to permit the reader to deal with common facial injuries with dispatch and in a proved effective manner.

Richard Carlton Schultz, M.D.

PREFACE TO THE THIRD EDITION

The second edition of this book addressed some of the needs of the emerging specialties of emergency medicine and family practice in the management of facial injuries. It also dealt with the issue of patient expectations regarding the outcome of facial injury treatment and how this is related to medical liability. The latter problem shows no signs of resolution; in fact, it has escalated to such crisis levels as to nearly disable physicians in certain regions of the United States from providing conscientious surgical care for victims of facial injury.

Progress is relentless, however, and since writing the second edition I have witnessed new concepts that can now be applied to the management of both the acutely injured facial fracture patient and to the patient requiring secondary reconstruction. New and refined concepts of establishing and holding intermaxillary occlusion have been contributed by American and European maxillofacial surgeons, especially with their use of mini-plates, compression plates, and intraoral splints. Primary rigid bony fixation to avoid intermaxillary fixation, achievement of structural rigidity with compression plates and bone grafts for both primary and secondary reconstruction, upper and midface osteotomy for recontouring post-traumatic facial bone deformities, and the use of cranial bone as a donor site have all come from craniofacial surgery. To introduce these fresh ideas authoritatively, I have included four new chapters written by surgeons representing these surgical disciplines.

With the new diagnostic modalities of refined computed tomography and nuclear magnetic resonance and the more comprehensive surgical planning available through computerized imaging, we now have opportunities to provide a level of care to the patient with massive facial injuries that was unavailable a decade ago. Although these advanced methods have not reduced the cost of treating facial injuries, they often can restore to the injured victim a unique possession—his individual identity.

Richard Carlton Schultz, M.D.

ACKNOWLEDGMENTS _____

A great deal of the communication of information for this book is through the medium of artistic illustration. For this reason, I should like to express my sincere thanks to my medical illustrators, the late Professor Hooker Goodwin and Professor William Schwarz from the University of Illinois College of Medicine at Chicago, and from Lutheran General Hospital, Pam McGaghie, Scott Barrows, Sarah Crenshaw McQueen, Mary Marine, Jerry Schoendorf, Dany Richards Fields, and Elisa Pereiro Hillock, who also so capably designed the book's cover.

Richard Carlton Schultz, M.D.

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