MANUAL OF STANDARD PRACTICE OF PLASTIC AND MAXILLOFACIAL SURGERY

MILITARY SURGICAL MANUALS
NATIONAL RESEARCH COUNCIL

MANUAL OF STANDARD PRACTICE

of

PLASTIC AND MAXILLOFACIAL SURGERY

Prepared and Edited by the Subcommittee on Plastic and Maxillofacial Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council, and Representatives of the Medical Department, U. S. Army

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VOLUMES IN THIS SERIES

I. Manual of Standard Practice of Plastic and Maxillo-facial Surgery
II. Ophthalmology and Otolaryngology
III. Abdominal and Genito-urinary Injuries
IV. Orthopedic Subjects
V. Burns, Shock, Wound Healing, and Vascular Injuries
VI. Neurosurgery and Thoracic Surgery

FOREWORD

THE Medical Department of the Army has been confronted with the necessity for enormous and rapid expansion paralleling that of the armed forces. The state of war has greatly increased the task of furnishing adequate medical care for Army personnel since battle casualties are added to the already wide range of diseases and injuries that must be treated.

Expansion of the medical establishment of the Army is entirely dependent on entry into the service of individuals from civil life. While most reserve officers have had a varying amount of military training, practically all medical officers will encounter problems in the military service entirely foreign to their previous experiences. These problems are by no means confined to those of an administrative nature; many are distinctly professional. The military situation imposes certain restricting factors which render impracticable some procedures that would be considered ideal in civil life. The goal of furnishing the best possible treatment to all individuals is the same in the Army as in civil life, but the means to attain that goal may differ materially.

There has been a marked tendency to specialization within the medical profession since the first World War. This tendency is fundamentally sound but does serve to increase the problems of many individual medical officers in time of war. Specialization cannot be followed to the same degree in the military service as in civil life. While many highly qualified specialists in the various fields of medicine and surgery will serve in like capacities in the Army, this cannot invariably be true. The great burden of medical care will fall on medical officers outside the highly specialized fields. It is thus essential that nearly all medical officers be familiar with the principles of military surgery. Recent advances in therapy have resulted in radical modification of certain principles of treatment that were formerly considered sound.

This series of texts presents in compact form essential up-to-date and reliable information regarding military surgery. The various sections have been written by outstanding authorities in their respective fields. They have been prepared for publication under the auspices of the Division of Medical Sciences of the National Research Council.

These texts will prove a highly valuable source of professional information for any surgeon desiring a knowledge of the principles of military surgery. Their application is not confined to military medicine, for most of the wounds and injuries of modern warfare may be duplicated in civil emergencies. The condensed form and avoidance of debatable points will render them very convenient for quick reference as well as for more mature study.

These volumes represent an important addition to the field of surgical texts. The individuals instrumental in their preparation have made a distinct contribution to civil and military medicine by their assemblage and presentation of this timely professional information.

JAMES C. MAGEE
Major General, U. S. Army
The Surgeon General

The naval medical officer is often faced with medical or surgical situations with which he must deal entirely alone and without the opportunity for consultation and assistance from other members of his profession. He may be the only medical man on a ship in the middle of an ocean, and any surgical emergency must be met by him and him alone. He cannot refer the case to a specialist; he himself must do everything that is necessary. It is important that he have the best assistance that professional books and journals can give him. A book such as this manual, which contains practical and essential things, readily accessible, is a real help to a medical officer and patient in this situation.

ROSS T. MCINTIRE
Rear Admiral, Medical Corps
Surgeon General, U. S. Navy

INTRODUCTION

THIS volume is one of a series developed under the auspices of the Division of Medical Sciences of the National Research Council to furnish the medical departments of the United States Army and Navy with compact presentations of necessary information in the field of military surgery. The individual manuals are prepared under the auspices of the various subcommittees of the Committee on Surgery of the Division of Medical Sciences of the National Research Council and are edited by the Committee on Information.

The first three volumes cover the following subjects: plastic and maxillofacial surgery; ophthalmology and otolaryngology; and abdominal and genito-urinary injuries. Succeeding volumes will contain material on the following: orthopedic subjects (ununited fractures, injuries of the spinal column, compound fractures, and osteomyelitis); burns, shock, wound healing, and vascular injuries; neurosurgery and thoracic surgery.

The Committee on Surgery includes Drs. Evarts A. Graham, Chairman, Irvin Abell, Donald C. Balfour, George E. Bennett, Warren H. Cole, Frederick A. Coller, Robert H. Ivy, Herman L. Kretschmer, Charles G. Mixter, Howard C. Naffziger, Alton Ochsner, I. S. Ravdin, and Allen O. Whipple. The Committee on Information includes Drs. Morris Fishbein, Chairman, J. J. Bloomfield, John F. Fulton, Richard M. Hewitt, Ira V. Hiscock, Sanford V. Larkey, and Robert N. Nye.

Most of the detail of the editorial work has been done by Dr. Richard M. Hewitt, head of the Division of Publications, the Mayo Clinic, Rochester, Minnesota.

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RECONSTRUCTIVE SURGERY

Ferris Smith, M.D.

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THE purpose of this manual is directive. Haste in reconstructive surgery is made slowly; time is the friend of both the surgeon and the patient; judgment in planning and procedure derives not only from knowledge of sound basic principles, but also from experience.

The manual provides a standard of practice and accomplishment to aid the surgeon in the discharge of his duty to the casualty. The patient has a right to expect that the best in modern practice will be employed to expedite his comfortable recovery and restore his functions and appearance to the greatest attainable degree.

The accomplishment of such results depends on the intelligent cooperation—"team work"—of all services concerned, from the time the casualty leaves the field until he is discharged from the hospital. It must result from avoidance of many past mistakes—a recognition of both the good and the bad in literature and practice. The "don't's" throughout the text are as important as the things to be done.

This manual is also a guide. It is not intended to stifle the initiative or to limit the ingenuity of the surgeon. There are other methods that produce acceptable results, but such must be based on the principles outlined. *The surgeon should not be permitted to deviate from these standards unless his practice can be fully justified.*

It is desirable to express gratitude to several persons for their cooperation in the production of this text: to Carl Adams for the fine illustrations, to Josephine Miller for the excellent photography, and to Kathryn Richard for her splendid assistance in the editorial work. Acknowledged also with thanks is the generous permission of the following publishers and editors to use material from their texts and journals: Thomas Nelson and Sons: Reconstructive Surgery of Head and Neck, Ferris Smith. J. B. Lippincott Company: Annals of Surgery, V. P. Blair, Use of Live Tendon Strips in Cases of Facial Palsy, October, 1930. Surgery, Gynecology and Obstetrics: Blair and Byers, Paralysis of Lower Lid, February, 1940. The American Medical Association: Archives of Ophthalmology, V. P. Blair, Fascial Support of the Lid for the Correction of Ptosis, June, 1932.

FERRIS SMITH, M.D.

CHAPTER I

GENERAL CONSIDERATIONS

THE object of all real surgery is the restoration of a part to normal or as near to normal as possible. The "normal" includes not only *function* but also *cosmetic* condition. The very nature of most surgery requires maximal attention to the former and little, if any, concern about the latter. It is true, however, that surgeons dealing with exposed parts, particularly the head and neck, have striven for centuries to give that concern to cosmetic condition which it deserves.

The maxillofacial surgeon must constantly evaluate this dual responsibility, sometimes yielding something of the possible functional efficiency to desirable cosmetic results, and vice versa. At other times the question of function is not involved at all—the surgeon must undertake alteration of appearance for reasons equally important.

The casualty from the field of battle has a right to expect and demand the optimal result which can accrue from a highly cooperative professional service and a skill which results from the utilization of all that is best in the general and special experience related to his particular problem. His future mental comfort and success in the competition of living will be materially influenced by his facial function and appearance.

The desired results may be accomplished only by the understanding and cooperative effort of the entire professional personnel concerned from the moment that the casualty is taken up on the field until he is discharged from the hospital.

This guide is concerned with fundamentals—essentials to successful outcome—and with operative procedures which embrace the best of present knowledge and experience. These are not the only methods of accomplishing acceptable results. They are directive. They are published with the assumption that the surgeon will not deviate widely from the principles involved unless his end-result fully justifies such departure.

The "don't's" throughout the text are as essential as the things to be done. If shift from the indicative to the imperative mood will aid toward brevity or desired emphasis, the shift is made.