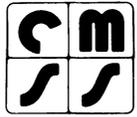


Comprehensive Manuals of Surgical Specialties



Richard H. Egdahl, editor

William P. Longmire

Ronald K. Tompkins

Manual of Liver Surgery

Includes 230 illustrations, 142 in full color

Illustrated by Ted Bloodhart

Springer-Verlag
New York Heidelberg Berlin

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Sponsoring Editor: Larry W. Carter

Production: Berta Steiner/Lawrence R. Meyer

Design: Caliber Design Planning, Inc.

Library of Congress Cataloging in Publication Data

Longmire, William P.

Manual of liver surgery.

(Comprehensive manuals of surgical specialities)

Bibliography: p.

Includes index.

1. Liver—Surgery. I. Tompkins, Ronald K.

II. Title. III. Series. [DNLM: 1. Liver—Surgery—Handbooks. WI 770 L856m]

RD546.L57 617'556 81-9079
AACR2

© 1981 by Springer-Verlag New York Inc.

Softcover reprint of the hardcover 1st edition 1981

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9 8 7 6 5 4 3 2 1

ISBN-13: 978-1-4612-5837-7

e-ISBN-13: 978-1-4612-5835-3

DOI: 10.1007/978-1-4612-5835-3

To Jane and Susie,
our tolerant wives, who have
encouraged us in the
preparation of this manuscript

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Editor's Note

Comprehensive Manuals of Surgical Specialties is a series of surgical manuals designed to present current operative techniques and to explore various aspects of diagnosis and treatment. The series features a unique format with emphasis on large, detailed, full-color illustrations, schematic charts, and photographs to demonstrate integral steps in surgical procedures.

Each manual focuses on a specific region or topic and describes surgical anatomy, physiology, pathology, diagnosis, and operative treatment. Operative techniques and stratagems for dealing with surgically correctable disorders are described in detail. Illustrations are primarily depicted from the surgeon's viewpoint to enhance clarity and comprehension.

Other volumes in the series:

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Manual of Chest Surgery

Manual of Upper Gastrointestinal Surgery

Manual of Ambulatory Surgery

Manual of Trauma Surgery

Richard H. Egdahl

Foreword

As research in liver disease has greatly expanded over the past few decades the etiology, pathology, and natural history of many hepatic disorders have been clearly defined. Many new and accurate diagnostic tools are now available. In spite of all this progress the treatment of many liver diseases remains ameliorative.

Nevertheless a more aggressive and successful surgical approach has taken place in regard to many diseases of the liver in part due to the pioneering work of Dr. William P. Longmire, Jr. and his colleagues. Dr. Longmire was among the early advocates of liver resection of neoplasms, successfully removing a large benign tumor of the liver in 1946. In the following decades his contributions covered the surgical treatment of trauma, tumors, cysts, and other congenital abnormalities. He has performed hundreds of operations on patients with these disorders.

In 1948 he reported a procedure now named for him, in which intractable common duct obstruction was relieved by partial left hepatectomy and cholangiojejunostomy. He was one of the first to advocate side-to-side portacaval shunt for portal hypertension. Other essential contributions by this master surgeon were the periodic reviews that covered the advances in his field. Dr. Longmire, with his scholarly approach and broad background of knowledge in all aspects of hepatic surgery, is exceptionally qualified to write this book. He and his colleague, Dr. Ronald K. Tompkins, are to be congratulated on this complete treatise.

Hugh A. Edmonson
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Preface

While serving a locum tenens almost 40 years ago in a small rural town, shortly after finishing my internship, I was called to the emergency room of the local 35-bed hospital to see a well developed, muscular man about 20 years of age who had suffered a severe blow to the right lower chest and upper abdomen in an automobile accident. As the young man writhed with pain his face grew pale, the pulse thready and the abdomen more and more distended. The rapid infusion of intravenous saline and glucose solution was totally ineffective in altering his rather rapid, fatal downhill course. It was obvious that the patient was bleeding from a massive laceration of the liver, but under the circumstances, with transportation out of the question, blood for transfusion and a trained anesthetist unavailable, an inexperienced scrub nurse as the sole assistant, and the overwhelming shortcomings of my own surgical training and experience, I concluded that the patient's only chance for survival would be for the bleeding to tamponade itself in the tense belly. It was certain that if the abdomen were opened the patient would quickly exsanguinate.

My inadequacies in this early experience stimulated an interest in liver surgery which has persisted over the years, and it is a summary of those experiences, coupled with those of Dr. Tompkins and the general surgical staff at the UCLA Hospital, that serve as a basis of this volume. We believe that we have had sufficient experience with the many aspects of hepatic surgery to express an informed opinion about many of these varied conditions and their management.

In a field as complex as hepatic surgery there will obviously be differences of opinion in regard to methods of management. In general we have tried to present these differences of judgment as well as to state our own opinion.

There are excellent publications concerned with specific aspects of hepatic surgery. Certain volumes are devoted solely to tumors of the liver, hepatic trauma, operative techniques, transplantation, or intrahepatic biliary surgery. In this volume we have attempted to blend the reports of others with our own broad experience in hepatic surgery, to supply the reader with the background information needed to recognize potential liver problems, and to proceed with an orderly program of diagnosis and treatment. Specific information is presented about the various pathological conditions, including a recommended plan of management and a discussion of the technical details involved.

The successful performance of major hepatic surgery requires the accumulation of a certain body of knowledge and the development of special skills on the part of the surgeon as well as the availability of sophisticated support services and personnel. Many surgeons today in all parts of the country have the necessary knowledge and skills and have the support of appropriate facilities and personnel to manage successfully many types of hepatic surgery.

Massive elective resections and the management of severe traumatic lacerations of the liver are, in most instances, best conducted, when possible, in centers with special capabilities in hepatic surgery. Practical circumstances do not always permit treatment under ideal conditions, and a general surgeon should be well acquainted with the conditions of the liver that might require his skills in an emergency. He should also be acquainted with the elective procedures appropriately performed in his practice and the knowledge to recognize those conditions that might best be referred elsewhere. It is our hope that this volume will provide surgeons with the information upon which such decisions can be made and acted upon.

We express our sincere appreciation to Mr. Ted Bloodhart for his magnificent art work, which contributes so much to this volume, to our secretaries, Annette Ryne and Rita Emerson, for their devoted attention to the preparation of the manuscript, to Roxanne Holmes and Marina Preussner for their technical assistance, and to Margaret Stevenson for her excellent editorial contribution. We wish also to thank the Weingart Foundation and the Ralph B. Lloyd Foundation for their financial assistance in the preparation of this Volume.

Introduction

Hepatic surgery has advanced steadily during the past century. Surgical procedures have evolved from the occasional removal of pedunculated tumors or wedge resection of small, localized liver lesions to a variety of explicitly designed and executed resections. Although the collected operative mortality statistics for hepatic surgery were remarkably good during the last century and the early portion of this century, refinement in operative techniques and the utilization of a wide spectrum of supportive measures have made hepatic resection a procedure that today can be used in many centers around the world with quite acceptable risks.

In recent years the indications for hepatic resection have been expanded, and now encompass a multitude of benign and malignant conditions. Portions of the liver frequently are resected for traumatic lacerations, primary and secondary malignant tumors, such benign conditions as adenoma, focal nodular hyperplasia, and hemangioma, and for other vascular anomalies, both congenital and acquired. The treatment of congenital or infectious cystic lesions of the liver also may involve hepatic incision or resection.

This volume presents a discussion of those aspects of liver anatomy and physiology that are of importance to surgeons who operate on this vital organ. Numerous diagnostic procedures are outlined, and surgical techniques used for the treatment of a wide range of pathological conditions are discussed in detail.