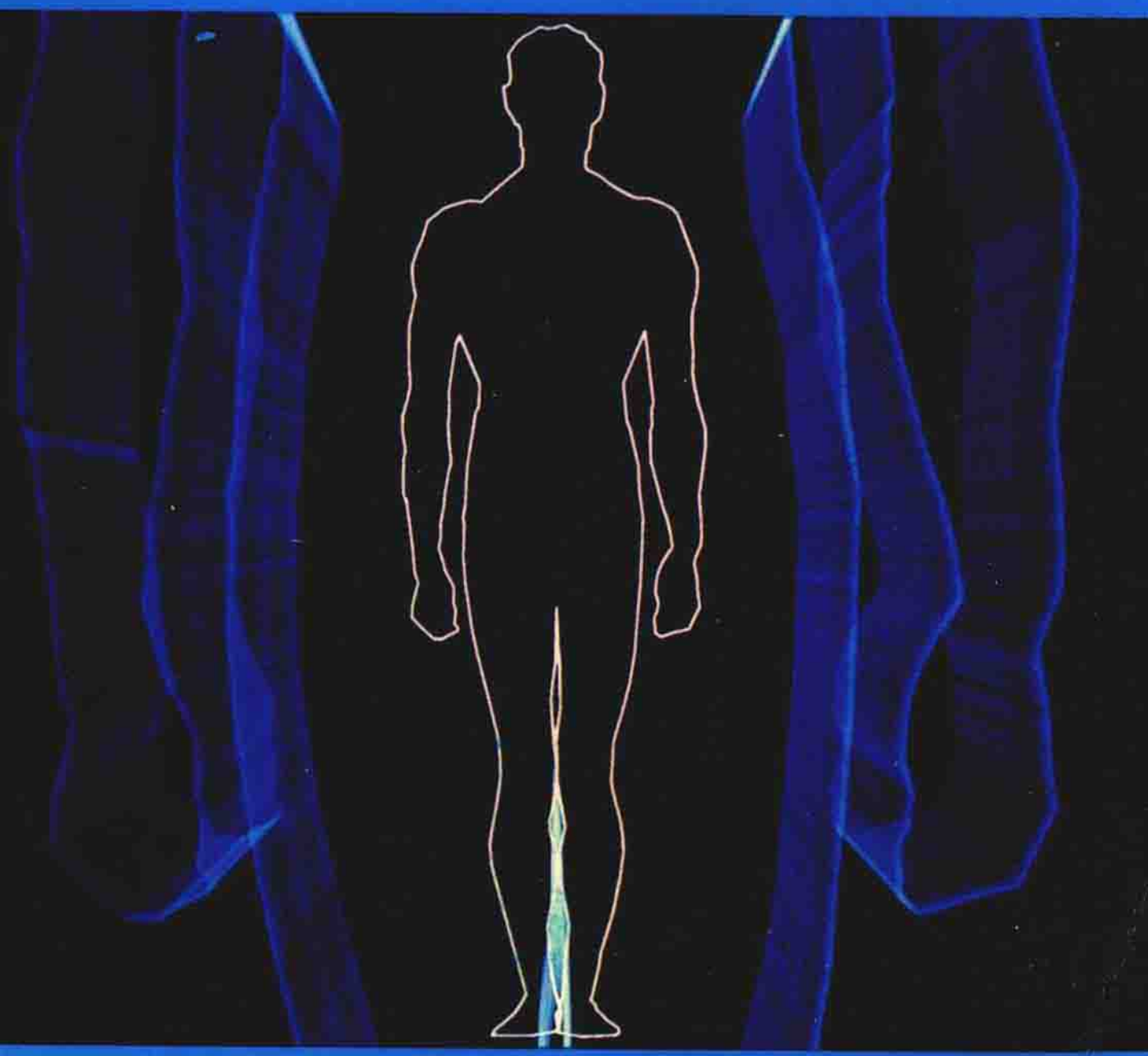
Practical Guide to the Care of the SURGICAL PATIENT

Robert L. McEntyre



THIRD EDITION

A Practical Guide to the Care of the SURGICAL PATIENT

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Third Edition

with 13 illustrations

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To: Laura and Julie

PREFACE

to the third edition

I am grateful for the opportunity to revise and update the information in the *Practical Guide to the Care of the Surgical Patient*. Many helpful comments and suggestions from you, the reader, have contributed greatly. The purpose of this manual remains unchanged: to serve as a concise, ready, quick-reference guide. The organization and outline form remain the same.

Care of the total patient, including medical aspects, is emphasized. Discussion of new drugs, such as **verapamil**, **ceftazidime**, and **nizatidine**, are included. Indications for medications and dosages are extended and pediatric dosages are updated. Illustrations for surgical procedures are provided and the laboratory section is completely revised.

As an overview, the title page of each main section, which is prefaced with a brief statement about its contents, should be consulted. This information should be of great value in understanding and using this manual. Hopefully, the manual itself will continue to serve the needs of house officers, medical students, assistants, nurses, as well as the EMT-paramedics.

I am very pleased with the response to the first two editions and am happy to continue in this work. Many thanks to The C.V. Mosby Company, Ms. Terry Van Schaik, Editor, special lab consultant Ms. Jeanne Martens, and to all the students and residents around the country who read and critiqued the chapters. Also, thanks go to all my friends and family members for their help and understanding in the preparation of this edition.

Robert L. McEntyre, M.D.

PREFACE

to the first edition

William S. Halsted introduced the surgery residency system to the United States. Ever since then, an important element of surgical training has been the passage of information from resident to resident. This manual aspires to continue that tradition by providing an ongoing reference system in the area of preoperative and postoperative care.

Practical Guide to the Care of the Surgical Patient is designed to provide those directly involved in patient care with practical information in a concise and usable form. You may wonder how to acquire consultations, what orders to write, which dosages to use, how to initiate diagnostic and therapeutic management, or how to interpret laboratory data. Suggestions and guidelines for these aspects of preoperative and postoperative care are presented. Each section is prefaced with a brief statement about its contents.

The manual was written by a resident for residents, although it is also hoped that this information will be valuable to medical students, surgeons' assistants, nurses, and others. It is not intended to substitute for the necessary in-depth reading of standard textbooks or surgical literature. Rather, it should stimulate further thinking and studying, which should thus provide a firmer understanding of the material presented.

I am indebted to all who contributed their ideas and encouragement in this work. In particular, thanks are due G. Tom Shires, Professor and Chief of Surgery, his attending staff and residents, as well as the medical students, surgeons' assistants, and nurses at The New York Hospital-Cornell Medical Center. My thanks also go to Dr. Dina Stallings, for her support over the years; to my wife, Barbara, for her constant support and typing; to my family, for their understanding and encouragement; and to many others, too numerous to mention.

Robert L. McEntyre

CONTENTS

SECTION ONE

KEY TELEPHONE NUMBERS

Because of the frequent need to contact various departments, consulting physicians, and nursing stations, this section is placed first. Each list should be completed by the individual user. In this way the manual is personalized and provides an immediate source of reference.

1. Key departments
2. Consulting physicians
3. Nursing stations
4. Other frequently called numbers

KEY TELEPHONE NUMBERS

Department	Extension	Location	Department	Extension	Location
Admitting			EKG		
Anesthesia			ER		
Bacteriology			Hematology		
Blood Bank			ICU		
Blood Gases			Information		
Cardiac Care Unit			IV Team		
			Medical Records		
Chemistry			MRI		
Coagulation			Nuclear Medicine		
CT					
Cytology			Nursing		
Drug Information Center			ORs		
			Paging		
Drug Levels			Pathology		
Echocardiography			Pharmacy		
			Physical Therapy		
Echoencephalography					
			Pulmonary Function		
EEG					

Recovery Room		
Rehabilitation		
Respiratory Therapy		
Security		
Social Service		
Sonography		
Surgery		
Surgical Library		
Surgical Pathology		
Urinalysis		
Utilization Review		
X-ray		
(diagnostic)		
Angiography		
Cardiac Catheterization		
Lymphangiography		
Mammography		
Pediatric		
Portables		
Preoperative		
Urologic		
X-ray (therapeutic)		

Consulting physicians	Extension	Location
Anesthesia		
Cardiology		
Dentistry		
Endocrine		
ENT		
GI		
Hematology		
Infectious Disease		
Medicine		
Neurology		
OB/GYN		
Oncology		
Ophthalmology		
Orthopedics		
Pediatrics		
Pediatric Surgery		
Plastic		
Pulmonary		
Psychiatry		
Radiology		
Renal		
Surgery		
Thoracic		
Transplant		
Urology		

Other	Extension	Location	Other	Extension	Location

Nursing Stations and Extensions

1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
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Other Frequently Called Numbers

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15 _____	_____	33 _____	_____
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17 _____	_____	35 _____	_____
18 _____	_____	36 _____	_____

Other Frequently Called Numbers—cont'd

37 _____ _____
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48 _____ _____
49 _____ _____
50 _____ _____

SECTION TWO

ORDERS, NOTES, AND PREPARATIONS

This section presents practical guidelines in an outline form that follows the general course of a surgical patient admitted to the hospital:

1. Admission orders
2. Preoperative orders
3. Preoperative check
4. Operative note
5. Postoperative orders
6. Postoperative check
7. Laboratory and medication preparations

It should be remembered that these are only suggestions and guidelines, since the routines may vary at different institutions.

ADMISSION ORDERS

This is a guide to the formulation of the actual orders for the patient. No single list of orders would be appropriate for every patient, but certain considerations should be made.

Disposition

List the ward and service to which the patient is being admitted (e.g.: Admit to G5-Blue surgical service).

Diagnosis

The actual diagnosis (e.g., acute pancreatic pseudocyst) or the provisional diagnosis (e.g., perforated viscous) should be noted.

Condition

Specify the patient's general condition. Simple terms such as "good," "fair," "poor," or "critical" convey the message satisfactorily.

Allergies

List any medications to which the patient has experienced an allergic reaction. Even if allergies are denied, ask

specifically about penicillin, sulfonamides, aspirin, iodine, and tape. Also note any medications the patient must avoid (e.g., atropine in patients with glaucoma or asthma).

Obtain Old Chart

Patients who are returning to the hospital have records available, which should be sought. Much time can be saved by consulting these for information concerning a previous admission (presentation, examinations, laboratory work, medical and surgical treatment, response, complications). Relevant information should be assessed and summarized in the appropriate part of the present admission.

Diet

Specify whether NPO, clear liquids, full, soft, regular, or special diet. Modify appropriately with regard to dentition and underlying diseases (cardiac, diabetes, peptic ulcer, renal failure, etc.). Consider forced fluids, fluid restriction, salt restriction, low fat, low cholesterol, amount of roughage, and supplements. Nutritional status should be assessed, and, when appropriate, enteral feedings or hyperalimentation should be considered. (See *Hyperalimentation* in Section Seven.)

Activity

Activity appropriate for the patient's current condition should be specified (up, chair, bed rest, commode, bathroom privileges, bath, assistance). If activity is to be restricted, leg exercises, deep breathing, and other prophylactic measures should be considered.

Vital Signs

Specify how frequently these observations should be made in order to adequately assess the patient (q1h, q2h, q4h, q8h).

IV Fluids

Specify fluid composition and rate. Include appropriate replacement of preexisting deficits and ongoing losses, as well as maintenance requirements. (See *IV fluid management* in Section Six.)

Intake and Output

Accurate records of the volume and composition of fluid intake (PO, IV) and measured losses (NG, urine, fistula)

are important guides in the calculation of proper fluid management.

Daily Weights

Significant changes in weight and trends toward weight gain or weight loss are especially important in patients with renal, hepatic, or cardiac impairment. These patients may have edema, ascites, or congestive failure. Adjustment of fluids or diuretics or both may be indicated.

Diagnostic Tests

Routine: CBC, electrolytes, glucose, BUN, PT, PTT, VDRL, type and crossmatch, chest x-ray, ECG, urinalysis. *Specific* (as appropriate): Blood gases, other chemistries, coagulation screen, cultures, cytology, endocrine, special hematology, pulmonary tests, scans, sonograms, other x-rays, etc. Arrange for the appropriate preparation of the patient when needed for specific tests (see *Laboratory and medication preparations* at the end of this section). Specify any stat tests.

Drugs

Incoming medications.
Symptomatic medications:
- Bowels: Order laxative or antidiarrheal when appropriate.
- Fever: Order antipyretic or other cooling measures when indicated.
- Pain: Appropriate analgesic may be ordered in absence of contraindications (e.g., allergy or undiagnosed abdominal pain).
- Sedation: Order sedative when appropriate.
- Sleep: Order bedtime hypnotic when needed.

Therapeutic medications: Consider any other specific medications that may be indicated (e.g., antibiotics, cardiac drugs, diuretics, insulin, and steroids).

Optional

NG suction, #14 or #16 Fr. (standard); lavage (Ewald tube); Cantor (5-8 ml Hg).
Catheterization of urinary bladder, #18 Fr. Foley; 8 ml NS.
Monitoring: Urine output, CVP, Swan-Ganz pressures, ECG, etc.
Preparations: Barium enema, colonoscopy, body scan,

bowel, SBE, steroid (see *Laboratory and medication preparations* at the end of this section.

Wound: Cultures, irrigations, dressing changes.

Specimens: Stool guaiacs or Hemoccult; Accu-cheks or urine glucose and acetone; cultures.

Position: Elevate head of bed, elevate extremity.

Preventive care: Turn, range of motion, elastic stockings, Ace bandages, chest physical therapy, endotracheal suctioning.

Precautions: Infection, seizure, suicide, side-rails up, etc.

Consultations: Anesthesia, cardiology, dietary, hematology, medicine, etc.

Notify MD if (specify: fever, hypotension, etc.).

The mnemonic DAVID helps one to remember the basic set of admission orders:

D: disposition, diagnosis, and diet
A: allergies and activity
V: vital signs
I: IVs, intake and output
D: daily weights, diagnostic tests, and drugs

PREOPERATIVE ORDERS

NPO after midnight.

Prep and shave(may be done in O.R.).

Antiseptic shower (povidone-iodine or hexachlorophene soap).

Void on call to the OR.

Premedications (may be written by anesthesiologist in some hospitals):

Sedative IM on call to OR (such as barbiturate or narcotic); dose may vary with the age, weight, and condition of the patient.

Atropine, 0.4-0.6 mg IM, on call to OR (for general anesthesia) unless the patient has fever, glaucoma, asthma, or other contraindication to the use of atropine.

Optional: Antibiotics, enemas, IV hydration, transfusion, steroids. (See *Laboratory and medication preparations* at the end of this section.)

PREOPERATIVE CHECK

Assess the results of CBC, electrolytes, glucose, BUN, PT, PTT, chest x-ray, ECG, and urinalysis and note them in the chart. Note whether operative consent, preoperative orders, and cross-match (when necessary) are in order.

Follow up significant abnormal laboratory tests, and revise orders when necessary.

OPERATIVE NOTE

Preoperative diagnosis (e.g., acute appendicitis)
Postoperative diagnosis (e.g., same)
Operation (e.g., appendectomy)
Surgeon: (name)
Assistants: (names)
Anesthesia: (name)
Findings: (describe)
Specimen and result of frozen section
Location of drains or tubes
Estimated blood loss
IV fluids given
Complications
Patient's condition and disposition

POSTOPERATIVE ORDERS

Disposition, Operation, Condition, Allergies (specify)

Vital Signs

Specify frequency as needed to adequately assess the patient. Usual routine is: every 15 minutes for the first hour, then every half hour until fully recovered from anesthesia, then every hour for 4 hours, then per nursing routine if the patient's condition is stable.

IV Fluids

Specify fluid composition and rate. Include replacement solutions (e.g., NG suction losses) as well as maintenance requirements. Potassium is normally included in replacement solutions but is excluded from maintenance solutions until normal renal function is established (e.g., on the first POD).

Diet

Specify according to the individual patient and operative procedure. Usual routine is: NPO until postnausea and passing flatus; then begin with clear liquids, and advance to usual diet as tolerated.

Ambulation

Early ambulation is recommended whenever possible to encourage deeper respirations and to help prevent thrombophlebitis. Usual routine is: may stand to void when

fully reacted; then up ad lib at least tid (if postoperative condition permits).

Turning, Coughing, and Deep Breathing

Every hour until patient is ambulatory helps to clear secretions and open smaller airways, but excessive coughing may be detrimental in some cases (e.g., after thyroidectomy or herniorrhaphy). Aspiration of nasopharynx and trachea may be necessary for adequate pulmonary toilet.

Incentive Spirometer

May be beneficial in preventing postoperative atelectasis by encouraging deep breathing.

Antiembolic Stockings or Ace Wraps

Advocated routinely by many surgeons to help prevent thromboembolic disease of the lower extremities in patients at risk. Others believe that early ambulation has more to recommend it when feasible.

Voiding

With normal renal function and adequate fluid intake, most patients are expected to void by 6-8 hours postoperatively or, better still, 8-12 hours after the preoperative voiding. If a catheter is present in the bladder, a urine output of 30-60 ml/hour is usually considered adequate.

Drains, Tubes, and Catheters

Specify the type of drainage desired (straight or gravity drainage, suction, etc.) and if IV fluid replacement is indicated.

Notifying House Officer

Ensure notification of any unusual condition by specifying it in the order, e.g., if:

Temperature $>$ 38.5°
Pulse $>$ 120 or $<$ 50
Respirations $>$ 40 or $<$ 10
Blood pressure $<$ 100/60 or $>$ 180/100
Unable to void by 8 hours postoperatively
Bright red blood saturate the dressing

Intake and Output

Essential in the fluid management of seriously ill patients and after major operations (see *Admission orders*).