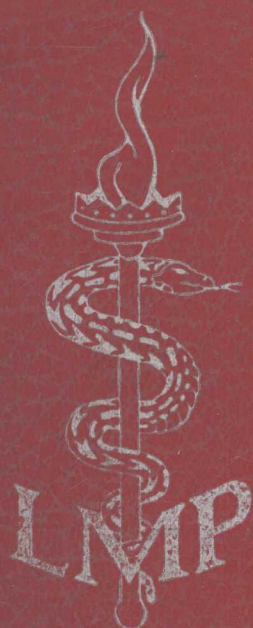


J. ENGLEBERT DUNPHY
MEMORIAL EDITION



Lawrence W. Way

current Surgical
Diagnosis & Treatment

6TH EDITION

J. ENGLEBERT DUNPHY MEMORIAL EDITION

***current* Surgical Diagnosis & Treatment**

6TH EDITION

Edited By

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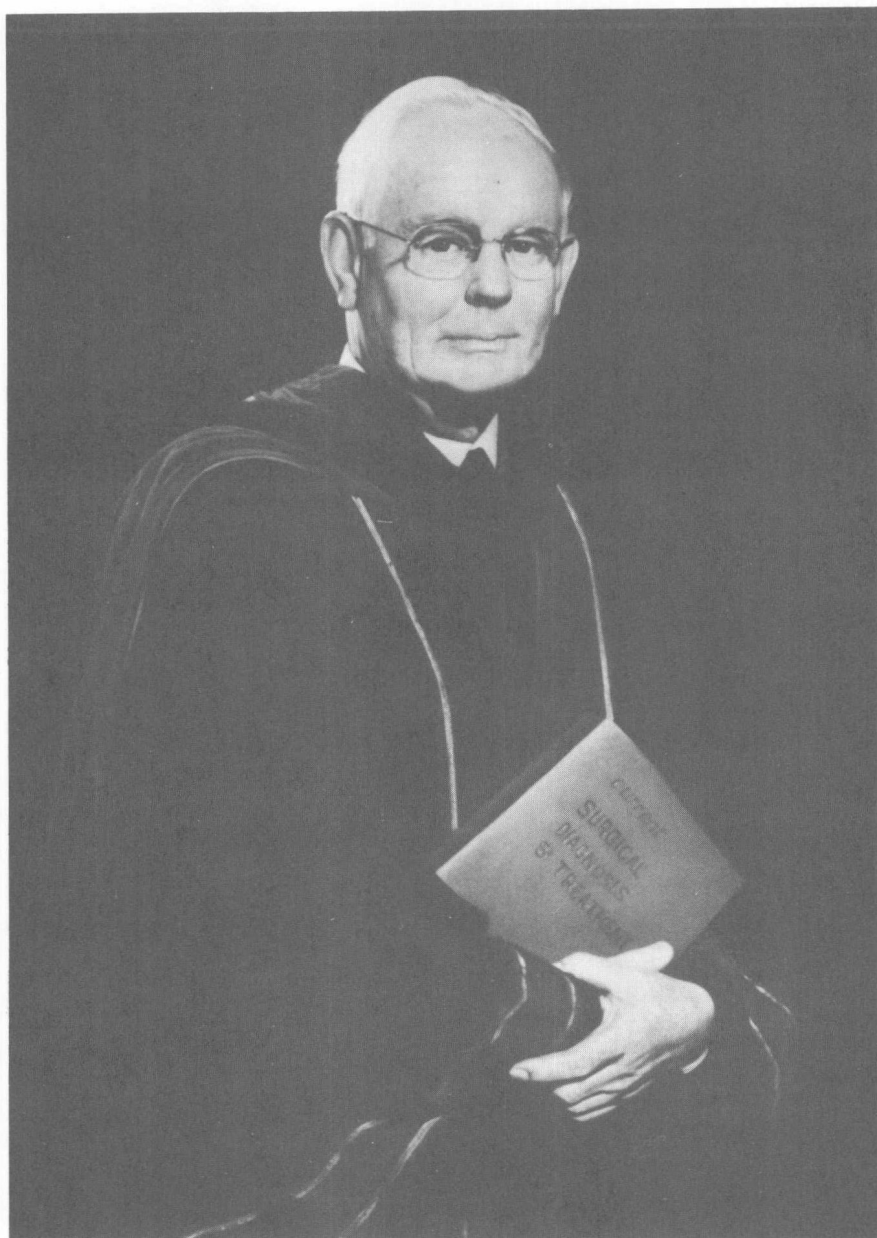
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Dedication

This edition of *Current Surgical Diagnosis & Treatment* is dedicated to the memory of Dr. J. Englebert Dunphy, the original architect of this text. Dr. Dunphy was a wonderful man—an outstanding surgeon, administrator, and leader. Perhaps his best moments, however, were as a teacher, where his instinct, knowledge, enthusiasm, and sympathy were so evident and had such an inspiring effect. He was thoroughly devoted to this book and was proud that it had received such a warm reception by students everywhere.

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Preface

The sixth edition of this surgical text makes available in concise form the basic information and the most recent developments in general surgery and each of the surgical specialties for medical students, residents, and practicing surgeons and physicians.

New information has been added to all chapters, and the bibliographies have been updated and expanded. Some chapters have been completely rewritten: postoperative care; special diagnostic procedures; shock; and orthopedics. Substantial revisions have been made in the chapters on preoperative care; nuclear medicine in surgical diagnosis; wound healing; inflammation, infection, and antibiotics; burns and other thermal injuries; thoracic wall, pleura, lung, and mediastinum; esophagus and diaphragm; liver; pancreas; large intestine; urology; gynecology; and plastic surgery.

The editor expresses gratitude for the cooperation of all the contributors in the numerous additions, alterations, and deletions required to make each chapter an integrated part of the text.

Translations of *Current Surgical Diagnosis & Treatment* have been completed in Spanish, Portuguese, Serbo-Croatian, Polish, and Japanese and will soon be available in German, Italian, French, and Turkish.

Lawrence W. Way, MD

San Francisco
September, 1983

NOTICE

The authors and editors have been careful to recommend drug dosages that are in agreement with current official pharmacologic standards and the medical literature. Because all drugs may evoke idiosyncratic or toxic reactions, because drugs may interact with others in ways that modify therapeutic effectiveness and toxicity, and because some drugs are teratogenic, it is recommended that all clinicians review drug manufacturers' product information (eg, package inserts), especially in the case of new or infrequently prescribed medications. Furthermore, one must be thoroughly conversant with any drugs used in order to advise the patient about signs and symptoms of potential adverse reactions and incompatibilities.

The Editors

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Approach to the Surgical Patient

1

J. Englebert Dunphy, MD

The successful management of surgical disorders requires (1) the effective application of a broad knowledge of the basic sciences to the problems of diagnosis and total care before, during, and after the operation; and (2) a genuine sympathy for, understanding of, and indeed love for the patient. The surgeon must be a doctor in the old-fashioned sense, an applied scientist, an engineer, an artist, and a minister to his or her fellow human beings. Because life or death often depends upon the validity of surgical decisions, the surgeon's judgment must be matched by courage in action and by a high degree of technical proficiency.

THE HISTORY

The surgeon's first contact with the patient is crucial. This is the time to gain the patient's confidence and convey the assurance that help is available and will be given. Above all, the surgeon must demonstrate concern for the patient as a person who needs help and not just as a "case" to be processed through the surgical ward. This is not always easy to do, and there are no rules of conduct except to be gentle and considerate. Most patients are eager to like and trust their doctors and respond gratefully to a sympathetic and understanding manner. Some surgeons are able to establish a confident relationship with the first few words of greeting; others can only do so by means of a stylized and carefully acquired bedside manner. It does not matter how it is done, so long as an atmosphere of sympathy, personal interest, and understanding is created. Even in an emergency (unless the patient is unconscious), this subtle message of sympathetic concern must get across.

Eventually, all histories must be formally structured, but much can be learned by letting the patient ramble a little. Discrepancies and omissions in the history are often due as much to overstructuring and leading questions as to the unreliability of the patient. The enthusiastic novice asks leading questions; the cooperative patient gives the answer that seems to be wanted; and the interview concludes on a note of mutual satisfaction with the wrong answer thus derived.

BUILDING THE HISTORY

History taking is detective work. Preconceived ideas, snap judgments, and hasty conclusions have no place in it. The diagnosis must be established by inductive reasoning. The interviewer must first determine the facts and then search for essential clues, realizing that the patient may conceal the most important symptom—eg, the passage of blood by rectum—in the hope (born of fear) that if it is not specifically inquired about or if nothing is found to account for it in the physical examination, it cannot be very serious.

Common symptoms of surgical conditions that require special emphasis in the history taking are discussed in the following paragraphs.

Pain

A careful analysis of the nature of pain is one of the most important features of a surgical history. The examiner must first ascertain how the pain began. Was it explosive in onset, rapid, or gradual? What is the precise character of the pain? Is it so severe that it cannot be relieved by medication? Is it constant or intermittent? Are there classic associations, such as the rhythmic pattern of small bowel obstruction or the onset of pain preceding the limp of intermittent claudication?

The nature of abdominal pain is of particular importance and is dealt with in some detail in Chapter 24.

One of the most important aspects of pain is the patient's reaction to it. The overreactor's description of pain is often obviously inappropriate, and so is a description of "excruciating" pain offered in a casual or jovial manner. A patient who shrieks and thrashes about is either grossly overreacting or suffering from renal or biliary colic. Very severe pain—due to infection, inflammation, or vascular disease—usually forces the patient to restrict all movement as much as possible.

Moderate pain is made agonizing by fear and anxiety. Reassurance of a sort calculated to restore the patient's confidence in the care being given is often a more effective analgesic than an injection of morphine.

Vomiting

What did the patient vomit? How much? How

often? What did the vomitus look like? Was vomiting projectile? It is especially helpful for the examiner to see the vomitus. Important clues helpful in the diagnosis of disorders associated with vomiting are described in detail in Chapter 24.

Change in Bowel Habits

A change in bowel habits is a common complaint that is often of no significance. However, when a person who has always had regular evacuations notices a distinct change, particularly toward intermittent constipation and diarrhea, colon cancer must be suspected. Too much emphasis is placed upon the size and shape of the stool—eg, many patients who normally have well-formed stools may complain of irregular small stools when their routine is disturbed by travel or a change in diet.

Hematemesis or Passage of Blood Per Rectum

Bleeding from any orifice demands the most critical analysis and can never be dismissed as due to some immediately obvious cause. The most common error is to assume that bleeding from the rectum is attributable to hemorrhoids. The character of the blood can be of great significance. Does it clot? Is it bright or dark red? Is it changed in any way, as in the coffee-ground vomitus of slow gastric bleeding or the dark, tarry stool of upper gastrointestinal bleeding? The full details and variations cannot be included here but will be emphasized under separate headings elsewhere.

Trauma

Trauma occurs so commonly that it is often difficult to establish a relationship between the chief complaint and an episode of trauma. Children in particular are subject to all kinds of minor trauma, and the family may attribute the onset of an illness to a specific recent injury. On the other hand, children may be subjected to severe trauma though their parents are unaware of it. The possibility of trauma having been inflicted by a parent ("battered child syndrome") must not be overlooked.

When there is a history of trauma, the details must be established as precisely as possible. What was the patient's position when the accident occurred? Was consciousness lost? Retrograde amnesia (inability to remember events just preceding the accident) always indicates some degree of cerebral damage. If a patient can remember every detail of an accident, has not lost consciousness, and has no evidence of external injury to the head, brain damage can be excluded.

In the case of gunshot wounds and stab wounds, knowing the nature of the weapon, its size and shape, the probable trajectory, and the position of the patient when hit may be very helpful in evaluating the nature of the resultant injury.

The possibility that an accident might have been caused by preexisting disease such as epilepsy, diabetes, coronary artery disease, or hypoglycemia must be carefully explored.

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When all the facts and essential clues have been gathered, the examiner is in a position to complete the study of the present illness. By this time it may be possible to rule out, by inductive reasoning, all but a few possible diagnoses. A novice diagnostician asked to evaluate the causes of shoulder pain in a given patient might include ruptured ectopic pregnancy in the list of possibilities. The experienced physician will automatically exclude that possibility on the basis of sex or age.

Family History

The family history is of great significance in a number of surgical conditions. Polyposis of the colon is a classic example, but diabetes, Peutz-Jeghers syndrome, chronic pancreatitis, multiglandular syndromes, other endocrine abnormalities, and cancer are often better understood and better evaluated in the light of a careful family history.

Past History

The details of the past history may illuminate obscure areas of the present illness. It has been said that people who are well are almost never sick, and people who are sick are almost never well. It is true that a patient with a long and complicated history of diseases and injuries is likely to be a much poorer risk than even a very old patient experiencing a major surgical illness for the first time.

In order to make certain that important details of the past history will not be overlooked, the "system review" must be formalized and thorough. By always reviewing the past history in the same way, the experienced examiner never omits a significant detail. Many skilled examiners find it easy to review the past history by inquiring about each system as they perform the physical examination on that part of the body.

In reviewing the past history, it is important to consider the nutritional background of the patient. There is an increasing awareness throughout the world that the underprivileged malnourished patient responds poorly to disease, injury, and operation. Indeed, there is some evidence that various lesions such as carcinoma may be more fulminating in malnourished patients. Malnourishment may not be obvious on physical examination and must be elicited by questioning.

Acute nutritional deficiencies, particularly fluid and electrolyte losses, can be understood only in the light of the total (including nutritional) history. For example, a low serum sodium may be due to the use of diuretics or a sodium-restricted diet rather than to acute loss. In this connection, the use of any medications must be carefully recorded and interpreted.

A detailed history of acute losses by vomiting and diarrhea—and the nature of the losses—is helpful in estimating the probable trends in serum electrolytes. Thus, the patient who has been vomiting persistently

with no evidence of bile in the vomitus is likely to have acute pyloric stenosis associated with benign ulcer, and hypochloremic alkalosis must be anticipated. Chronic vomiting without bile—and particularly with evidence of changed and previously digested food—is suggestive of chronic obstruction, and the possibility of carcinoma should be considered.

It is essential for the surgeon to think in terms of nutritional balance. It is often possible to begin therapy before the results of laboratory tests have been obtained, because the specific nature and probable extent of fluid and electrolyte losses can often be estimated on the basis of the history and the physician's clinical experience. Laboratory data should be obtained as soon as possible, but a knowledge of the probable level of the obstruction and of the concentration of the electrolytes in the gastrointestinal fluids will provide sufficient grounds for the institution of appropriate immediate therapy.

The management of electrolyte imbalances is discussed fully in Chapter 12.

The Patient's Emotional Background

Psychiatric consultation is seldom required in the management of surgical patients, but there are times when it is of great help. Emotionally and mentally disturbed patients require surgical operations as often as others, and full cooperation between psychiatrist and surgeon is essential. Furthermore, either before or after an operation, a patient may develop a major psychotic disturbance that is beyond the ability of the surgeon to appraise or manage. Prognosis, drug therapy, and overall management require the participation of a psychiatrist.

On the other hand, there are many situations in which the surgeon can and should deal with the emotional aspects of the patient's illness rather than resorting to psychiatric assistance. Most psychiatrists prefer not to be brought in to deal with minor anxiety states. As long as the surgeon accepts the responsibility for the care of the whole patient, such services are superfluous.

This is particularly true in the care of patients with malignant disease or those who must undergo mutilating operations such as amputation of an extremity, ileostomy, or colostomy. In these situations, the patient can be supported far more effectively by the surgeon and the surgical team than by a consulting psychiatrist.

Surgeons are becoming increasingly more aware of the importance of psychosocial factors in surgical convalescence. Recovery from a major operation is greatly enhanced if the patient is not worn down with worry about emotional, social, and economic problems that have nothing to do with the illness itself. Incorporation of these factors into the record contributes to better total care of the surgical patient.

THE PHYSICAL EXAMINATION

The complete examination of the surgical patient includes the physical examination, certain special procedures such as gastroscopy and esophagoscopy, laboratory tests, x-ray examination, and follow-up examination. In some cases, all of these may be necessary; in others, special examinations and laboratory tests can be kept to a minimum. It is just as poor practice to insist on unnecessary "thoroughness" as it is to overlook procedures that may contribute to the diagnosis. Painful, inconvenient, and costly procedures should not be ordered unless there is a reasonable chance that the information gained will be useful in making clinical decisions.

THE ELECTIVE PHYSICAL EXAMINATION

The elective physical examination should be done in an orderly and detailed fashion. One should acquire the habit of performing a complete examination in exactly the same sequence, so that no step is omitted. When the routine must be modified, as in an emergency, the examiner recalls without conscious effort what must be done to complete the examination later. The regular performance of complete examinations has the added advantage of familiarizing the beginner with what is normal so that what is abnormal can be more readily recognized.

All patients are sensitive and somewhat embarrassed at being examined. It is both courteous and clinically useful to put the patient at ease. The examining room and table should be comfortable, and drapes should be used if the patient is required to strip for the examination. Most patients will relax if they are allowed to talk a bit during the examination, which is another reason for taking the past history while the examination is being done.

A useful rule is to first observe the patient's general physique and habitus and then to carefully inspect the hands. Many systemic diseases show themselves in the hands (cirrhosis of the liver, hyperthyroidism, Raynaud's disease, pulmonary insufficiency, heart disease, and nutritional disorders).

Details of the examination cannot be included here. The beginner is urged to consult special texts.

Inspection, palpation, and auscultation are the time-honored essential steps in appraising both the normal and the abnormal. Comparison of the 2 sides of the body often suggests a specific abnormality. The slight droop of one eyelid characteristic of Horner's syndrome can only be recognized by careful comparison with the opposite side. Inspection of the female breasts, particularly as the patient raises and lowers her arms, will often reveal slight dimpling indicative of an infiltrating carcinoma barely detectable on palpation.

Successful palpation requires skill and gentleness. Spasm, tension, and anxiety caused by painful examination procedures may make an adequate exam-