BOOK REVIEWS

Review of Hemodialysis for Nurses and Dialysis Personnel. C. F. Gutch and Martha H. Stoner. Saint Louis, C. V. Mosby Co., 1971. spiral-bound soft cover, $7.50.

A programmed text on a series of lectures to a group of nurses and dialysis personnel is a welcome addition to those of us faced with the problem of training such people to handle dialysis procedures. This contribution to the literature by Gutch and Stoner meets the task very well. It is written in the form of a question-and-answer book, but it is really a series of lectures that are well organized and cover the full field of dialysis from the composition of the dialysis team, to the chemistry and physiology involved in renal failure, to the “how to” of dialysis.

In some instances the questions are rather complicated and the answers rather simple. For instance, the “disequilibrium syndrome” is dismissed as a problem related to shifts of water, pH, and osmolarity. While this is probably the state of affairs there is certainly some disagreement in medical circles concerning the pathophysiology of the disequilibrium syndrome.

There is very little to criticize in reviewing this book and a great deal to praise. This book can be a backbone program for all those responsible for the training of dialysis personnel. It can also be used with some value in orienting medical students to the problems of the treatment of chronic renal failure by dialysis techniques. Patients, especially those who are to be treated on home dialysis in the future, may find this book helpful. There is a useful glossary at the end of the book and also an appendix that includes the sodium and potassium contents of selected foods. Both of these are extremely helpful in a dialysis center. This book should be available on the shelf in every area where a dialysis machine is introduced.

SHELDON GLABMAN, M.D.

Uremia: Progress in Pathophysiology and Treatment. John P. Merrill and Constantine L. Hampers. New York, Grune & Stratton, Inc., 1971, 115 pages, $7.00.

Drs. J. P. Merrill and C. L. Hampers are extremely well qualified to undertake a progress report on the pathophysiology and treatment of uremia. Their long experience and contributions in the field of the treatment of renal failure render them ideal authors. As stated in the preface, the book is an outgrowth of a medical progress report which appeared in the New England Journal of Medicine in April, 1970. The progress report, a section on treatment, and sections on pathophysiology and treatment of uremia comprise the contents of this book.

The topics chosen to be discussed in pathophysiology are the ones that concern us all, as physicians, in the treatment of patients with renal failure. The initial section on renal function in uremia reviews the “intact nephron hypothesis” of Bricker and his associates. This section is, perhaps, the most important section in understanding nephron function in uremia, and there is an authoritative comment on Bricker’s hypothesis as well as other more recent data added by other workers in this field. Included are recent micropuncture data that are pertinent to the problems of renal failure and renal function.

Calcium metabolism in uremia is given very extensive treatment. The authors refer to the vitamin D problem, elucidated by a number of authors recently. They also wisely choose to refer to “autonomous” rather than “tertiary” hyperparathyroidism. They attribute this problem to a failure to be sensitive to usual factors that regulate parathyroid secretion. Most authorities would agree with their definition of autonomous hyperparathyroidism. In the section that considers the treatment of uremia, they again discuss the problem of calcium metabolism under the heading “management of renal osteodystrophy.” Only a small percentage of uremic patients develop clinical abnormalities of bone metabolism which require specific treatment. In the authors’ experience this accounts for 10% of the patients entering a dialysis or transplantation program. The topic of posttransplant hypercalcemia, despite normal renal function, is mentioned without a warning that the use of antacids containing phosphates may enhance the development of soft tissue calcification.

The discussion of the treatment of anemia in renal failure does not refer to the literature concerning the effects of androgens on lowering the transfusion requirement for patients on long-term dialysis.

This is an authoritative review of the treatment of uremia. This book can be recommended to all those who deal with the problems of renal failure.
It can also be read with benefit by students of medicine. The depth of the review is highlighted by the fact that close to 300 references were used to produce this 115-page book. The authors did a commendable job in editing, collating, and presenting this handy reference on uremia.

SHELDON GLABMAN, M.D.

A Primer of Clinical Diagnosis. Edited by William B. Buckingham, Marshall Sparberg, and Martin Brandfonbrener. New York, Harper & Row, 1971, 346 pages, $12.75.

The question on the mind of a reviewer of a new text on physical diagnosis and history taking is, "What does this book have to offer that the many already existing books do not?" This primer, and it is truly that, has several notable features which allow us to answer the question in a positive fashion.

The primer was written for medical students at Northwestern University who study their introduction to clinical medicine before completing physiology and pathology. Individual items are dealt with clearly and accurately but quite briefly, and generally little in the way of pathophysiologic basis or explanation is provided for the individual manifestations of disease. This is presumably because the student is not prepared to understand such explanations, but the book would have been stronger, although larger, if concise authoritative mechanisms had been included. Similarly, reference lists are omitted.

The book wisely discusses physical examination before history taking, a more logical sequence than the reverse, and a practice which this reviewer has followed in his teaching since 1948. The discussion of the examination of the cardiovascular system is the strongest section of the book and comprises one fourth of its pages. The section on the examination of the abdomen is well done, and there is a stronger section on the examination of the eye, including ophthalmoscopy, than is usually found. The introduction to history taking provides some good general points and guides for the beginner.

The book has some omissions and small errors though fewer than most comparable books, and altogether this is a very satisfactory "primer" for the student who is beginning the study of clinical medicine. The lack of inclusion of explanations and mechanisms of phenomena of disease does not provide continuing value to the book, and the properly curious student would have to supplement the text by other sources which provide information of more substance and in more depth.

J. D. MYERS, M.D.

Peripheral Vascular Diseases. Edited by John F. Fairbarn II, John L. Juergens, and John A. Spittell Jr. Philadelphia, W. B. Saunders, 1972, 797 pages, $25.00.

This new fourth edition continues the tradition of clinical excellence, completeness, and readability of earlier editions. Extensively revised after 10 years by Fairbarn, Juergens, and Spittell, there is still no reasonable substitute for basic access to information in the field. Historical vignettes of physicians contributing to the field have been continued. The basic information of the earlier editions, including the better color plates, have been retained. The format has been improved using a slightly larger page with a double column, reorganizing related subjects for easier access, incorporating surgical treatment into the exposition of each individual disease, and placing most references together at the end. Although the total volume of text is not much greater, many individual subjects have been expanded. The excellent chapter on angiography has been nearly doubled in size. Additions include selective angiography of the abdominal and coronary arteries. More than eight chapters have been added by rearrangement and by inclusion of new material. Of particular note are those on "Occlusive Disease of Abdominal Visceral Arteries," "Dissecting Aneurysms of the Aorta," and "Vascular Diseases of the Skin." The numerous varieties of vasculitis have been assembled in one chapter, a considerable improvement over earlier editions.

A comprehensive review should detail the advances in peripheral vascular disease since the third edition appeared in 1962 and show how well these are represented in the fourth edition. Because of the size of such a project it must suffice to state that advances are fairly reflected in the new text and then be content with a few examples. Basic advances in our knowledge of clotting mechanisms and in the physiology of blood flow are thoughtfully reviewed. Many recent advances have been surgical and include the revolution in the treatment of acute arterial occlusions following the introduction of the balloon catheter by Fogarty, the use of immediate prosthetic fitting in lower extremity amputations, the acceptance of autogenous veins as the graft material of choice for arterial replacement in extremities, and the aggressive reconstructive approach to asymptomatic aneurysms. New pharmacologic advances are also well represented. There are discussions of pit viper venom (Arvin) as an antithrombotic agent, reserpine and phenoxylbenzamine (alpha-blocking agent) as arteriolar dilating agents in Raynaud's phenomenon, and azothioprine (immunosuppressive
agent) in the treatment of various types of vasculitis. In short, the reader will find here a balanced exposition of old and new.

A situation refreshing to this reviewer is the skillful and effective melding of medical and surgical points of view. Although Allen, Barker, and Hines were internists as are Fairbairn, Juergens, and Spittell, the surgical point of view has traditionally been fairly represented. The current 31 contributors include 12 surgeons. Although this is in no sense a surgical text, a surprising amount of technical detail is given, frequently enough to permit a reasonable choice between several different surgical procedures. The breadth of disciplinary representation is shown by the inclusion of four radiologists, three neurologists, two anesthesiologists, and a pathologist, a physiologist, and a dermatologist among the contributors. Although reflecting primarily the Mayo Clinic experience, and leaning toward conservatism, other important points of view are, nonetheless, detailed and discussed. The literature of the subject is opened to the reader by the inclusion of approximately 1500 bibliographic references. The net result is an authoritative but not authoritarian text. The book will be useful (or indispensable) at all levels: a text for the medical student, a bible for the resident or young practitioner, and a ready reference for the accomplished internist or vascular surgeon.

E. Converse Peirce II, M.D.

Cerebral Vascular Diseases: Seventh Princeton Conference on Cerebrovascular Diseases, Princeton, New Jersey, Jan. 7-9, 1970. Edited by John Moossy and Richard Janeyway. New York, Grune & Stratton, Inc., 1971, 258 pages, $9.75.

This is the edited transactions of the Seventh Princeton Conference on Cerebrovascular Diseases which was published in early 1971. Seven broad areas are covered: spinal cord vascular disease; cerebral edema and cerebral vascular disease; cerebral blood flow and metabolism; cerebral vascular insufficiency; cerebral circulation, acceleration, and the weightless state; diagnostic techniques in obstructive vascular disease; and intracranial arterial aneurysms.

For the first time in these Princeton Conferences, a significant portion of the conference was devoted to the spinal cord and its vasculature. The paper by Gillilan on the arterial and venous anatomy of the spinal cord is particularly informative and succinct. Clinical syndromes associated with ischemic vascular disease and arteriovenous malformations of the cord are adequately reviewed by Siekert. It is apparent from the discussions, though, that real studies on the dynamic mechanisms of spinal cord circulation are still sadly lacking.

Experimental studies on the pathogenesis of cerebral edema and its relation to cerebral hemorrhage and infarction in man continue to be a field of active investigation. Barlow's results with dexamethasone suggest a possible mechanism by which steroids may produce their well-documented beneficial effect in cerebral edema—that steroids reduce protein leakage by restoring normal vascular permeability and thus reduce the influx of osmotically bound water into the tissue. Clinically, the use of steroids to treat strokes and the presumed accompanying cerebral edema is still a controversial issue. There have been no controlled clinical investigations of carefully matched subjects, double-blind studies, and adequate criteria for estimating the presence or absence of cerebral edema in such large infarcts or hemorrhages. The same lack of careful clinical evaluations can be said for the use of hypothermia, hyperosmotic agents, and hyperventilation in the treatment of strokes.

A progress report on the controlled study of surgical treatment of transient ischemic attacks involving 1363 randomized surgery and no-surgery patients, with a follow-up period from 54 to 66 months in 16 participating institutions, has failed to show convincing evidence, at this time, for the effectiveness of surgery. Basic information on the incidence, prevalence, natural history, risk factors, and effectiveness of various therapeutic modalities is still not available.

A most interesting contribution was that of McCormick on the problems and pathogenesis of intracranial arterial aneurysms, based on his experience in the examination of 2000 consecutive brains from the autopsy service of the University of Iowa. Of a total of 125 patients with aneurysms, 75 had only unruptured aneurysms. McCormick's premise is that harboring an aneurysm unknowingly is not the grave situation it has been considered, and that aneurysms rupture uncommonly, with a reasonable estimate of 20% never rupturing. A closer examination of his figures, though, showed that the hazard of harboring an aneurysm of a certain size (over 5 mm) in a certain age group (between ages 20 and 60 years) is quite real. The more common theories of aneurysm formation were discussed and found wanting.

Morris B. Bender