GERIATRIC EMERGENCY MEDICINE

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American College of Emergency Physicians®

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To my sons, William and Michael;
to Stephanie, on behalf of dedicated and caring emergency nurses everywhere;
and to our elders who inspire us with their life experience, wisdom, and grace.

Stephen W. Meldon

To my parents, Mark and Simone,
whose love, support, and sacrifice allowed me to enter the field of medicine;
and to Joseph C. Darin, M.D., who provided me the opportunity to practice
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O. John Ma

To my residents and faculty who will create a better practice of emergency medicine;
to Caroline, Cyrus, and Nancy who have helped me get this far;
and to Alana Ducharme who assisted with editing many of these chapters.

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FOREWORD

WHILE MOST EMERGENCY PHYSICIANS (EP) readily understand that diseases in infants and children are age related, and have very different presentations and courses that are distinctly dependant upon age, they either don't know that this applies equally to the elderly, of they forget this in the heat of multiple problems. There isn't much in the Emergency Medicine (EM) literature that is specific to geriatrics, and certainly the normal aging changes in physiology are not recognized, remembered or understood.

It has been enormously educational for me to read this book. Not only does it reinforce many of the hard learned lessons that I have had to acquire over the past thirty years, but introduced me to many topics that I had never before been exposed to. I would certainly advise that this book become a compulsory reading for every EM residency, and would also advise a copy be available in every Emergency Department (ED).

The overview chapter is a very effective way to start; there are many physiologic changes of aging that need to be as well remembered and understood as are the physiologic changes of vital signs in infancy. For example, while the infant has a normal tachycardia, the geriatric patient often has a normal bradycardia, even without such a common medication as a beta blocking agent such as Popranolol.

There are many chapters in the book that provide excellent reviews of uncommon diseases that we think we understand, such as endocrine problems involving the thyroid. Nevertheless as the population ages, we see the ravages of many diseases that started much earlier in the patients life, such as treatment for hyperthyroidism with radioactive iodine that is now presenting as hypothyroidism in the elderly. The telltale neck surgical scar is not there to help, and the chapter describes very well the subtle and non classical presentation that is frequent in the elderly.

There are some very strong chapters that have a very common theme, such as dementia, trauma, and pneumonia and other sepsis in the elderly. The theme (and if the practicing physician learns nothing else from this book than this, there will be a markedly improved EM practice): elderly patients do not, and often cannot manifest the classical signs and symptoms that we have learned to appreciate with specific diseases. This means that we don't think of those diagnoses, don't search for evidence of their presence, and frequently underestimate the seriousness of the patient's problems. This leads to inappropriate workups, inappropriate failures in disposition, and mistakes in management that causes significant increases in morbidity and mortality. The repeated message in most if not all of these topics is that the EP must be quick to order diagnostic studies, must not fall into the trap of thinking it safe to treat as an outpatient, because it is safe in a younger patient, and must not underestimate the impending catastrophic decline in the elderly patient who "looks pretty good" on presentation. This is especially true of the septic elder who doesn't have a fever, despite a major infection; who can't manufacture an elevated white blood count, even though there might be a multi-lobar pneumonia present; and whose slight confusion is ascribed to an advanced age rather than a disease process. As well pointed out in the trauma chapter, advanced age alone invalidates many of the schemes for prediction of trauma seriousness, and is enough to warrant evaluation of the patient, thought to have sustained a minor mechanism of injury, in a trauma center. If there is one lesson I have personally learned from prior error in the geriatric patient, it is that they must be expected to do badly, not well, with a new onset trauma or illness.

In part this is because of the many comorbidities that will be present in virtually every elderly patient. In part, this is due to the polypharmacy with a bewildering complex series of interactions. These are often misses, as is well pointed out by many of the authors because of the patient's poor memory for the multiple medications being consumed, poor communication from the custodian of the elder, and lack of knowledge of the EP who cannot be expected to know every new oncology drug that is being used.

In part this is because the elder simply doesn't have the physiologic ability to show the result of the injury or disease. Perhaps the diminished pain perception of the geri-

atric patient is a blessing, but it certainly doesn't assist the EP to recognize impending failure of an organ.

The chapter on back pain is an excellent place to learn that the elder probably has a greater chance for significant pathology than an otherwise healthy young adult. This must translate to earlier use of diagnostic imaging that will be unfruitful in the young adult, but may reveal a spontaneous vertebral compression fracture, or a bony metastasis in the geriatric patient.

There are a number of chapters that represent material that ordinarily isn't part of the EP cognizance, but represent important parameters of observation for the elderly. One that I particularly enjoyed since it was a first for me, was the chapter on nutrition. In the past, this is a subject that is covered rarely, if ever, other than perhaps for the alcoholic patient, but is definitely not part of a standard curriculum for the care of the adult patient.

There are also a number of serious ethical concerns in the management of the geriatric patient, that I suspect often lead to incomplete workups and assumptions that management won't make any difference. For example, the chapter on alcoholism reminds the EP that this disease hasn't disappeared just because the patient has aged. Moreover I suspect many EPs don't look for this problem because they feel the elderly patient is entitled to drink since there are so few other pleasures still available to them. As a result, they assume that an alcohol induced dementia is irreversible and represents Alzheimer's or some other chronic aging dementia; that atrial fibrillation is chronic rather than an example of "holiday heart" and that alcohol is "salutary" rather than causing a deterioration in otherwise stable chronic diseases.

There are of course many other chapters that I haven't referred to that are filled with useful and thoughtful recommendations for diagnosis, management, and will surely improve the knowledge of the reader; but even if you don't wish to read the book from cover to cover, and I heartily enjoyed my journey through the book, you should consult it often. This book is a tremendous addition to the literature of Emergency Medicine, and I hope it will see many editions because it can only improve with time.

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PREFACE

THE FAMILIAR ADAGE IN PEDIATRICS—"children are not just small adults"—applies as well to the care of geriatric patients. While elders may technically be "just older adults," overwhelming evidence demonstrates that they possess unique pathophysiologic and clinical concerns, which require the application of special management principles. This specialized understanding is particularly important within the confines of a busy emergency department.

This textbook was developed as a resource for clinicians who provide emergency care for older persons. Older patients who present to the emergency department may have baseline functional impairment and multiple comorbidities that may make them vulnerable to mismanagement. For frail or impaired elders an emergency department visit is often a sentinel event, one that may mark the beginning of significant functional decline and loss of independence.

Most physicians are aware of the demographic changes that are occurring as our society ages. Elders currently make up approximately 13% (or more than 35 million people) of the United States population. The Census Bureau estimates that the number of older individuals will reach almost 68 million by 2024. Furthermore, the elder population is becoming increasing older, with the number of persons older than age 85 increasing at 3 to 4 times the rate of the general population. This unprecedented increase in the elder population will have a significant impact on healthcare in general and emergency medicine in particular.

Older patients represent a unique and heterogeneous population. Aging physiology, differences in presentation for common illnesses, and the accumulation of illness in this population highlight this observation. Emergency physicians usually view older patients with trepidation since their care requires more complex medical management and decision making. These tasks are made more difficult in the patient with cognitive impairment or if the patient is transferred from a nursing home setting. The result is often a prolonged evaluation that may still conclude with diagnostic uncertainty. Surveys have indicated that more than half of emergency physicians believe they have received insufficient training in geriatric emergency medicine and the majority note very few continuing medical education hours on this subject.

This textbook was written by and for health care workers who are engaged in the practice of emergency medicine. The breadth of the topics reflects the large number of important issues in geriatric emergency medicine. We have included key clinical concerns ranging from cardiovascular and pulmonary disease to falls, functional assessment, and nursing home issues. Emergency physicians certainly will find this textbook applicable to their daily practice. Physicians who practice in family medicine, internal medicine, and geriatrics should also find this book to be of value for specific clinical scenarios.

In each chapter, the epidemiology and pathophysiology are first reviewed. The clinical features, diagnosis and differential, and emergency department management of each clinical topic are then discussed. Each chapter emphasizes the key aspects as they pertain to geriatric emergency medicine; this textbook does not attempt to cover every element of emergency or geriatric medicine, but only those that relate to the acute care of the older patient.

A number of experts from a variety of specialties have contributed to this textbook. We would like to express our deep appreciation to the *Geriatric Emergency Medicine* chapter contributors for their commitment and hard work in helping to produce this textbook. We are indebted to several individuals who assisted us with this project; in particular, we would like to thank Andrea Seils, Jennifer Cosgrove, Martin Wonsiewicz, Regina Brown, and Richard Ruzycka at McGraw-Hill Medical Publishing.

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