Geriatric Emergency Medicine

Christian Nickel Abdelouahab Bellou • Simon Conroy Editors

Geriatric Emergency Medicine



Editors
Christian Nickel
Emergency Department
University Hospital Basel
Basel, Switzerland

Simon Conroy Department of Health Sciences University of Leicester Leicester, United Kingdom Abdelouahab Bellou Department of Emergency Medicine Beth Israel Deaconess Medical Center Harvard Medical School Boston, MA, USA

ISBN 978-3-319-19317-5 ISBN 978-3-319-19318-2 (eBook) https://doi.org/10.1007/978-3-319-19318-2

Library of Congress Control Number: 2017960903

© Springer International Publishing Switzerland 2018, corrected publication 2018

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword I

As EUSEM President and immediate Past-President, and EUGMS President and President-Elect, we congratulate the authors of this excellent textbook on geriatric emergency medicine. This book will help physicians to provide emergency care of the highest standard in a difficult sector that has a rapidly growing number of patients.

Geriatric emergency medicine is an ever more important specialist medical sector in every European country. The number of European emergency patients is growing. Statistically, every year the number of patients in emergency departments in many European states is equivalent to a quarter of the population of those countries. If these patients bring only one relative or friend with them, then half of the population of many European countries has contact with an emergency department.

In Europe with the further development of medical and social care, the average age of patients has reached a high level never seen in the past. This naturally also means the number of older patients seeking care every day in emergency departments is constantly rising. Older people need special treatment, which does not always correspond to the general guidelines we normally use for other patients. This specialist care may encompass social, psychological, behavioural and end-of-life aspects of treatment. Illness presentations in older patients may be different and sometimes difficult. Critical decisions on their treatment and case management must often be taken considering specific problems related to age such as the impact of falls, loneliness and lack of compliance.

This book will help provide structured and timely answers to the questions raised about illnesses and symptoms affecting these patients and how to manage them.

The EUSEM executive and council have strongly supported this project, which was undertaken jointly with the European Union Geriatric Medicine Society (EUGMS).

EUSEM's definition of emergency medicine declares that this is a medical specialty involving the prevention, diagnosis, treatment and management of acute illnesses and injuries needing immediate treatment. Emergency care involves patients **of all ages** and covers the entire body and also psychiatric illnesses. Rapid provision of treatment plays a key role in emergency medicine and places great demands on both in-hospital and pre-hospital care.

vi Foreword I

A recent conference of European health ministers about the future requirements of Europe's health care systems made an important comment:

There will be changing demands on health care. This is especially seen in the important sectors geriatrics and emergency medicine. We must identify the needs of the future today and decide how best these challenges can be met, not only nationally but also on a European level.

We believe this new textbook will provide excellent support to physicians working to meet this challenge. This book provides the answers to many questions that are posed every day when geriatric medicine and emergency medicine come together in emergency departments.

Roberta Petrino Emergency Medicine Unite at S. Andrea Hospital of Vercelli and S. Pietro and Paolo Hospital of Borgosesia, Italy President of the European Society for Emergency Medicine (EuSEM)

Barbara Hogan Emergency Departments at Mühlenkreiskliniken Hospital Group, Germany Immediate Past-President EuSEM

Stefania Maggi Aging Branch, CNR-Neuroscience Institute, Padua, Italy President of the European Union Geriatric Medicine Society (EUGMS)

Finbarr C. Martin
Dept. of Aging and Health, St. Thomas Hospital Dept. of Aging and Health
London, UK
President-Elect EUGMS

Foreword II

The ageing of the population is slowly transforming the practice of emergency medicine. Improvements in public health, medical technology and therapy have resulted in longer and healthier lives but at the cost of growth in the medical needs of the population. During the twentieth century, the percentage of patients older than 65 grew from 4% to 14%. This growth is expected to continue and reach 20% by 2026. Furthermore, older emergency patients have had disproportionally higher use of the emergency department (ED) than the rest of the population because they are more likely to develop life-threatening conditions.

Emergency medicine, the youngest primary specialty, came into existence because of the need to provide a unique approach to patients presenting to ED. The importance of timely interventions in emergency conditions resulted from significant dramatic improvements in diagnostics and therapeutic options from the dramatic improvements in healthcare in the twentieth century. The combined social pressures resulting from the need to provide high-quality healthcare and the desire to provide access to everyone, at any time, for any problem required the development of a new specialty. The same pressures that created the specialty are now pushing for the development of expertise specific for geriatric emergencies. Because older patients will need access to all emergency departments, it remains to be determined if this expertise should be used to create a subspecialty or an expectation of all emergency providers.

Older patients now account for more than a quarter of emergency visits in the USA. This developing change in the emergency patient population is also creating a strain on the resources available for emergency care. Emergency crowding particularly impacts older patients who are often among the first groups affected by the shortage of inpatient capacity.

The dichotomous nature of the emergency management of older patients presents a dilemma in terms of patient management. On one hand, frailty, blunted inflammatory response and cognitive disabilities vastly complicate the assessment of these patients. With age, a different and broader spectrum of emergency conditions develops. Life threats are more common and clinical presentations are often atypical or occult. Safely ensuring a timely diagnosis often requires prolonged investigations. On the other hand, there is a recognised mismatch between the services traditionally provided by the emergency department and the desires of the patients. Rather than the highly aggressive approach to diagnosis and therapy

viii Foreword II

traditionally used in emergencies, what most patients at the end of life want are supportive services and a focus on improving the quality of life rather than simply prolonging it.

Until recently, the evidence base for geriatric emergency medicine (GEM) has been somewhat neglected. Besides the challenges of delivering care, there is also the need to understand the biology of GEM: the unique aspects of ageing and how these affect a patient's ability to respond to a physical or psychological crisis. How can we measure frailty and immunologic impairment? How does ageing affect the endothelium, the cell, or the mitochondrion? What are the implications of these changes on resuscitation? There is a need for basic and clinical science in GEM to add new knowledge to acquire the evidence, which will help in improving management and outcome. The complexity of acute care of older patients in emergency medicine settings will require a multidisciplinary approach from researchers and a wide range of specialties with a close partnership between emergency physicians and geriatricians.

This book is an important step in disseminating knowledge, standardising care and setting a direction for future work on how to address the challenges of GEM. By providing medical providers with the information needed to improve the emergency care for older patients, we can begin to deliver a high-quality approach geared towards the needs of this vulnerable population.

Richard Wolfe
Associate Professor of Emergency Medicine
Chair of the Department of Emergency Medicine
Beth Israel Deaconess Medical Center a Teaching Hospital
of Harvard Medical School, Boston, MA, USA

Contents

Par	t I Pre-hospital Care and Initial Assessment	
1	Prehospital Management of Older Patients	3
2	Triage of Older ED Patients	17
3	Primary Assessment and Stabilization of Life-Threatening Conditions in Older Patients Mehmet Akif Karamercan, Abdelouahab Bellou, and Hubert Blain	23
4	Secondary Assessment of Life-Threatening Conditions of Older Patients	49
5	Clinical Assessment and Management of Older People: What's Different? Gertrude Chikura, Simon Conroy, and Fabio Salvi	75
6	Comprehensive Geriatric Assessment in the Emergency Department	91
Par	t II Management of Common Conditions	
7	Pitfalls in the Management of Older Patients in the Emergency Department. Fredrik Sjöstrand and Christian Nickel	111
8	Nonspecific Disease Presentation: The Emergency Department Perspective	127

x Contents

9	Falls Presenting in the Emergency Department	137
10	Syncope in Older People in the Emergency Department Nissa J. Ali, Laure Joly, and Shamai A. Grossman	147
11	Trauma in Older People	163
12	Management of Sepsis in Older Patients in the Emergency Department Abdelouahab Bellou, Hubert Blain, and Vishal Sehgal	177
13	Cognitive Impairment in Older People Presenting to ED	199
14	Depression in Acute Geriatric Care R. Prettyman and J. Banerjee	209
15	Abdominal Pain in Older Patients	217
16	Urinary Tract Infections in Older Patients. Roberta Petrino, Aldo Tua, and Fabio Salvi	235
17	Management of Acute Chest Pain in Older Patients Tim Arnold, Ursula Müller-Werdan, and Martin Möckel	247
18	Dyspnoea in Older People in the Emergency Department F. Javier Martín-Sánchez and Juan González del Castillo	261
19	Management of Back Pain in Older Patients	275
Par	t III Special Considerations in Frail Older People	
20	Medicine in Older Patients: Evidence Based?	291
21	Prescribing for Older Patients Paul Gallagher, Amanda Lavan, and Denis O'Mahony	299
22	Pain in Older People Attending Emergency Departments Sophie Pautex	315
23	Transitions of Care and Disposition	329
24	Principles of Rehabilitation in Geriatric Emergency Medicine Ebby Sigmund	345

Contents

25	Palliative and End of Life Care for Dementia Patients in the Emergency Department	353
26	Palliative and End of Life Care for the Older Person in the Emergency Department	361
27	Ethical Issues of Emergency Medical Care for Older Patients	369
Coı	rrection to: Management of Sepsis in Older Patients	
	in the Emergency Department	E1
Ind	ex	397