Syncope
Michele Brignole
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An Evidence-Based Approach
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Foreword by Richard Sutton
Foreword

Syncope has, in recent years, drawn considerable scientific and health economic attention. Scientific study of syncope began, perhaps with Morgagni describing heart block followed by Adams and Stokes adding their views of this condition. Fainting has been a human phenomenon probably as long as the species has existed. It was well recorded by such authors as Jane Austen, who named it a swoon. Gower in the early twentieth century termed the common faint as vasovagal syncope, a term reiterated by Sir Thomas Lewis in the 1930s. He was also well aware of carotid sinus syndrome, although credit for its description is usually given to Roskamm. Wayne added his detailed experience in the 1950s. The start of the present rush of scientific effort can be attributed to reports from the laboratories of Rosen, Kapoor, Klein, and Silverstein in the early 1980s. These articles highlighted the lack of knowledge then existing about syncope and provided the inspiration for the introduction of tilt testing. Tilt studies offered a means of reproducing vasovagal syncope in a laboratory permitting heart rhythm and hemodynamic studies. At the outset it was thought that the event precipitated by tilt mimicked spontaneous occurrences and the hemodynamics observed were those also of naturally occurring attacks. Unfortunately, this has not proved to be the case now that we can record spontaneously occurring events with implanted ECG loop recorders.

Growth of scientific efforts in the field of syncope prompted the American College of Cardiology, led by one of the authors of this text, Dr. David Benditt, to produce a consensus report on tilt testing for syncope in 1996. The European Society of Cardiology (ESC) then took the lead in attempting to define the nature of syncope and how to manage it inspired by Dr. Michele Brignole, the other author of this text. The ESC reports were presented in 2001, 2004, and 2009. The most recent of these drew together a very large number of scientific bodies to approve it. This was an important step in gaining recognition of the work of cardiologists and their close associates by other disciplines, which are clinically involved in the care of patients with syncope including neurology, geriatrics, pediatrics, emergency medicine, autonomic neurology, primary care, and internal medicine. Thus, there could be no two better scientists than Drs. Brignole and Benditt to undertake a textbook on syncope.

The scope of *Syncope: An Evidence-Based Approach* is very complete comprising as it does an up-to-date review of all aspects of the study of syncope.
including related health economic issues. This is very timely and important as syncope is often managed in an uneconomic manner with hospital admission implying numerous costly but not necessarily clinically valuable tests. A recent estimate of the annual cost of syncope in the USA is US $2.4 billion in 2006, which is comparable with the annual budget for the treatment of HIV disease. In these times of economic restraint there is a huge potential to save large amounts of health-care expenditure. The authors indicate, how savings can be achieved by improving effectiveness of the syncope evaluation, by risk stratification and by greater utilization of Syncope Management Units. The authors are at pains to place syncope in the context of transient loss of consciousness (T-LOC), which is precisely what is needed for the physician in the front line seeing a patient, who may have syncope.

This text is very warmly commended to a broad range of physicians, paramedical disciplines, and health economists.

London, UK
Richard Sutton
Preface

Rationale for a New Book

Syncope, better known to most people as “fainting” or “blacking out,” represents a complete albeit temporary loss of consciousness leading to interruption of awareness of one's surroundings and falls with risk of injury. Syncope has been estimated to occur at least once in about a half of all individuals during their life; many people suffer multiple faints. In terms of medical burden, syncope accounts for approximately 1% of emergency room visits. In 2006, syncope/collapse resulted in >1.1 million emergency department visits in the USA.

Syncope has many possible causes, but in each case the underlying mechanism is a transient insufficiency of blood flow to the brain. The result is a temporary disturbance of brain function causing loss of consciousness and collapse. By virtue of it being due to a self-limited hemodynamic problem (resulting, for example, from a heart rhythm disturbance or a drop in blood pressure of other cause), syncope differs from other conditions that cause loss of consciousness such as seizures, concussions, intoxications, or metabolic disorders. For example, seizures cause loss of consciousness due to a primary electrical problem in the brain, while concussion causes loss of consciousness secondary to brain trauma. It is crucial that the physician be able to differentiate syncope from these other forms of transient loss of consciousness.

Since syncope can be the result of any condition that results in a temporary loss of brain blood flow, it is best considered to be a syndrome (i.e., a set of symptoms that may be due to many possible causes) rather than a disease itself. Most often, when the fainter seeks medical attention, he/she has fully recovered from the event. Consequently, determining what happened is often very challenging.

Aims and Scope

Inasmuch as syncope and other causes of transient loss of consciousness (T-LOC) share many features, the diverse expertise of cardiologists, neurologists, emergency medicine specialists, general practitioners, geriatricians, and other clinicians is often needed in order to establish an accurate diagnosis and optimize treatment. Unfortunately, however, each of these subspecialities has tended to develop and use
different terminology, methodology, and management guidelines; the result, rather than facilitating management of affected patients, has complicated effective interaction among these various caregivers and has made evaluation and treatment more complex than it needs to be.

The authors of this book provide a thorough multidisciplinary review of the topic. As much as possible they offer recommendations consistent with the most recent European Society of Cardiology (ESC) guidelines which were developed in conjunction with multiple European subspeciality societies, as well as the Heart Rhythm Society and the American Autonomic Society.

The initial sections of the book discuss the scientific basis behind the diagnosis and management of T-LOC/syncope (both terms are often used together in this book since in the literature it is often unclear whether a specific “syncope” diagnosis was established). They detail the clinical pathways leading to syncope and the pathology behind them. The last section of the book then takes a more practical approach, defining recommendations for the practice of syncope management (i.e., evaluation and treatment). The most common procedures and tests are discussed along with their indications, methodology (when appropriate), interpretation, and limitations.

This book has been designed to fulfill the needs of the wide range of medical practitioners involved in the care of patients who present with transient loss of consciousness and in particular those who are thought to have had syncope. All specialties will benefit from the concentration on the importance of medical history taking. Emergency room physicians and internists will be aided by the focus on risk stratification. Cardiologists and cardiac electrophysiologists will find up-to-date recommendations regarding the indications for and appropriate interpretation of noninvasive and invasive cardiac testing. Neurologists and psychiatrists may find particular utility in the sections exploring the often difficult topic of distinguishing true syncope from other important conditions that may present as transient loss of consciousness or seeming loss of consciousness (e.g., seizures, sleep disorders, and psychiatric disturbances). A degree of redundancy has been inserted on purpose into the book, so that in large measure each chapter is able to “stand on its own”, and readers can then focus on the chapters that are most pertinent to their practice.

In closing, the authors wish to thank their many friends and colleagues (and especially those who served on the ESC Syncope Task Force) for their crucial input through invaluable discussions and debates over many years. These individuals have educated us and influenced our thinking; inevitably their ideas and contributions have made their way into and substantially improved this volume.

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