

the sinus node

structure, function and
clinical relevance

edited by Fabio L.M. Boriani



Martinius Nijhoff Medical Division

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Sinus Node Structure Function And Clinical Relevance

Lauren Gardner



Sinus Node Structure Function And Clinical Relevance:

The Sinus Node F.I. Bonke, 2012-12-06 For the clinician the sinus node is more or less a hidden structure and only by indirect assessment he is able to say something about the function of this center of pacemaker activity The morphologist however is able to describe the structural microscopic and even electronmicroscopic features of this structure The only disadvantage is that as soon as he is coming into the picture the tissue is dead The physiologist tries to investigate the electrophysiological behavior of the sinus node Since there is not a human being willing to give his sinus node for research he has to do his investigation on isolated preparations of animals Though there are a lot of experts in the field of the sinus node they nearly never speak the same language Therefore it was my dream to bring all those people or at least some of them together on a workshop I had the feeling that it was important to organize such a meeting without an audience but only with experts

The Sinus Node F.I. Bonke, 2011-10-13 For the clinician the sinus node is more or less a hidden structure and only by indirect assessment he is able to say something about the function of this center of pacemaker activity The morphologist however is able to describe the structural microscopic and even electronmicroscopic features of this structure The only disadvantage is that as soon as he is coming into the picture the tissue is dead The physiologist tries to investigate the electrophysiological behavior of the sinus node Since there is not a human being willing to give his sinus node for research he has to do his investigation on isolated preparations of animals Though there are a lot of experts in the field of the sinus node they nearly never speak the same language Therefore it was my dream to bring all those people or at least some of them together on a workshop I had the feeling that it was important to organize such a meeting without an audience but only with experts

Clinical Cardiac Electrophysiology Mark E. Josephson, 2008 Fully revised and updated Dr Josephson's classic text provides a thorough understanding of the mechanisms of cardiac arrhythmias and the therapeutic interventions used to treat arrhythmias This edition has a new full color design and a companion Web site offers the fully searchable text

Cardiac Rate and Rhythm L.N. Bouman, H. Jongsma, 2012-12-06 In the denervated state the mammalian heart both in vivo and in vitro is excited at very regular intervals the coefficient of variance of the interbeat intervals not exceeding 2% The pacemaker that is the source of this regular excitation is localised normally within the sinus node sino atrial node node of Keith and Flack a most intriguing small piece of tissue in the caval corner of the right atrium A small portion of this node containing a group of probably only a few thousands of cells fires spontaneously that means without any external influence to trigger their activity The so called pacemaker cells do this by letting their membrane potential fall to the level where an action potential will start which subsequently activates surrounding cells to fire an action potential The first question which is tackled in this book is which processes underly this spontaneous diastolic depolarization This is discussed in section I concerning the fundamental properties of pacemaker cells with special reference to ionic membrane currents Although views still quite differ about the exact nature of the membrane processes that cause the automatic pacemaker discharge

there is agreement that diastolic depolarization is brought about by the interaction of a number of ionic current systems including both inward and outward going currents

The Slow Inward Current and Cardiac Arrhythmias Douglas P. Zipes, J.C. Bailey, V. Elharrar, 2012-12-06 Since Paul Cranefield published his monograph *The Conduction of the Cardiac Impulse* in 1975 much has been learned about the role of the slow inward current in cardiac electrophysiology Because of this expansion in knowledge both basic and clinical it appeared reasonable to review in a monograph once again what was known When Martinus Nijhoff first approached us to undertake the task of updating this information we were initially reluctant for several reasons First we did not feel that the subject could be adequately and thoroughly reviewed from the cell to the bedside by a single person Second time constraints on all of us precluded even attempting such a task However we were encouraged by several of our friends egged on one might even say since they wished the job done but did not want to do it themselves who promised faithfully to contribute chapters on time if we accepted the task So we did and most of them did also

Cellular Pacemakers David O. Carpenter, 1982

Heart Rhythm Disorders J. Anthony Gomes, 2020-06-30 This engaging book covers a multitude of topics related to heart rhythm disorders HRDs and uniquely familiarizes readers with the development of treatment modalities over the past several decades including the evolution of anti arrhythmic drugs pacemakers defibrillators and catheter ablation Organized in ten sections this title serves as both an archival and a contemporary resource for clinicians The first section describes the discovery of the circulatory system by William Harvey in 1628 and outlines the development and understanding of HRD since the advent of intra cardiac electrophysiology Subsequent sections discuss the historical evolution of abnormal heart rhythms such as supra and ventricular rhythms and sudden cardiac death their treatment with drugs surgery pacemakers implantable defibrillators and catheter ablation Section nine offers a fascinating narration of the clinical evolution of overcoming heart attacks and its impact on HRDs The final section explores potential new frontiers in HRD and the factors that may contribute to the prospective rise of cardiovascular diseases A ground breaking and invaluable addition to the clinical literature

Heart Rhythm Disorders History Mechanisms and Management Perspectives details the pervasive nature of cardiovascular diseases in human history their ramifications and their projected effects on at risk demographic populations and human health in general

Cardiac Arrhythmia Philip J. Podrid, Peter R. Kowey, 2001 The Second Edition of this clinically oriented textbook about cardiac arrhythmia management continues to be a must have volume for practicing cardiologists and internists who require up to date information for the daily management of their patients The material prepared by recognized experts in the field presents an in depth look at diagnostic and treatment protocols in a readable well organized format Unique chapters regarding pregnancy athletes and genetics also are included A Brandon Hill recommended title

The Sinus Node in Pediatrics Steven M. Yabek, Paul C. Gillette, John D. Kugler, 1984

Understanding Electrocardiography Mary Boudreau Conover, 1992

Clinical Cardiac Pacing and Defibrillation Kenneth A. Ellenbogen, G. Neal Kay, Bruce L. Wilkoff, 2000 International authorities discuss

virtually every aspect of cardiac pacing and pacemakers in the Second Edition of this comprehensive reference including temporary cardiac pacing antitachycardia pacing new indications for cardiac pacing complications of cardiac pacing and interference with cardiac pacing Clinically focused and practical it contains essential information for anyone with patients with pacemakers and offers valuable information not available in any other text This edition is completely revised and updated to reflect the latest information

Cardiac Pacing and Electrophysiology Philip Samet,1991 *Progress in Clinical Pacing 1990* Massimo Santini,M. Pistolese,A. Alliegro,1990

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The Fine Structure of Cardiac Pacemaker Cells in the Sinus Node and in Tissue Culture M. Masson-Pevet,1979 Journal of the American College of Cardiology ,1994-03

Electrophysiology of the Sinoatrial and Atrioventricular Nodes Leonard S. Dreifus,Eric L. Michelson,American Heart Association. Scientific Sessions,1988

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Electrophysiologic Basis of ECG and Cardiac Arrhythmias Borys Surawicz,1995

Whispering the Secrets of Language: An Emotional Journey through **Sinus Node Structure Function And Clinical Relevance**

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