

Essentials of Atrial Fibrillation

Yee Guan Yap
A John Camm

Essentials of Atrial Fibrillation

Essentials of Atrial Fibrillation

Yee Guan Yap

Head and Associate Professor of Cardiology

Putra University, Selangor, Malaysia

and

Consultant Interventional Cardiologist

Prince Court Medical Centre, Kuala Lumpur, Malaysia

A John Camm

Professor of Clinical Cardiology

Division of Clinical Sciences

St George's University of London, London, UK

and

Honorary Consultant Cardiologist

St George's Hospital, London, UK

Published by Springer Healthcare, 236 Gray's Inn Road, London, WC1X 8HB, UK

www.springerhealthcare.com

First published 2010

Revised edition 2014

©2014 Springer Healthcare, a part of Springer Science+Business Media

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the copyright holder.

British Library Cataloguing-in-Publication Data.

A catalogue record for this book is available from the British Library.

ISBN 978 1 85873 438 5

Although every effort has been made to ensure that drug doses and other information are presented accurately in this publication, the ultimate responsibility rests with the prescribing physician. Neither the publisher nor the authors can be held responsible for errors or for any consequences arising from the use of the information contained herein. Any product mentioned in this publication should be used in accordance with the prescribing information prepared by the manufacturers. No claims or endorsements are made for any drug or compound at present under clinical investigation.

Project editor: Anne Carty and Katrina Dorn

Designer: Joe Harvey

Artworker: Sissan Mollerfors

Production: Marina Maher

Printed in Great Britain by Latimer Trend

Contents

Author biographies	vii
1 Epidemiology of atrial fibrillation	1
Prevalence and incidence of atrial fibrillation	1
Mortality, morbidity, and quality of life in atrial fibrillation	2
Social economics of atrial fibrillation	3
References	4
2 Pathogenesis of atrial fibrillation	7
Mechanism of atrial fibrillation	7
Autonomic influences in atrial fibrillation	7
Risk factors and causes of atrial fibrillation	8
Reversible causes of atrial fibrillation	8
Atrial fibrillation associated with heart disease	8
Atrial fibrillation without associated heart disease	9
Familial atrial fibrillation	9
References	9
3 Classification, diagnosis, and assessment of atrial fibrillation	11
Signs and symptoms	13
Blood tests	13
Electrocardiogram	13
Exercise stress testing	15
Chest radiograph	15
Echocardiogram	15
Implantable loop recorder and pacemaker log	16
References	19
4 Rate and rhythm control strategies for atrial fibrillation	21
Rate control versus rhythm control	21
Direct current cardioversion	23
Maintenance of sinus rhythm	27
Treatment strategy for paroxysmal atrial fibrillation	27
Treatment strategies for persistent atrial fibrillation	29
Treatment strategy for permanent atrial fibrillation	30
Surgical ablation	30

Catheter ablation for atrial fibrillation	32
References	33
5 Anticoagulant treatment strategies for atrial fibrillation	37
Antithrombotic therapy in atrial fibrillation	40
Novel oral anticoagulants	41
Clinical application	45
References	45