

HOSPITAL PHYSICIAN®

CARDIOLOGY BOARD REVIEW MANUAL

PUBLISHING STAFF

PRESIDENT, PUBLISHER
Bruce M. White

EXECUTIVE EDITOR
Debra Dreger

SENIOR EDITOR
Miranda J. Hughes, PhD

ASSISTANT EDITOR
Barclay Cunningham

EDITORIAL ASSISTANT
Melissa Frederick

SPECIAL PROGRAMS DIRECTOR
Barbara T. White, MBA

PRODUCTION MANAGER
Suzanne S. Banish

PRODUCTION ASSISTANTS
Tish Berchtold Klus
Christie Grams

ADVERTISING/PROJECT COORDINATOR
Patricia Payne Castle

NOTE FROM THE PUBLISHER:

This peer-reviewed publication has been developed without involvement of or review by the American Board of Internal Medicine.

 **Endorsed by the
Association for Hospital
Medical Education**

The Association for Hospital Medical Education endorses HOSPITAL PHYSICIAN for the purpose of presenting the latest developments in medical education as they affect residency programs and clinical hospital practice.

Anticoagulant Therapy for Coronary Heart Disease: Case Studies

Series Editor:

W. Robert Taylor, MD, PhD

Assistant Professor of Medicine, Director, Cardiovascular Disease Fellowship Training Program, Division of Cardiology, Department of Medicine, Emory University School of Medicine, Atlanta, GA

Contributing Author:

A. Maziar Zafari, MD, PhD

*Assistant Professor of Medicine, Division of Cardiology, Department of Medicine, Emory University School of Medicine, Atlanta, GA
Staff Cardiologist, Atlanta Veterans Affairs Medical Center, Decatur, GA*

Table of Contents

Introduction	2
Anticoagulant Therapy	2
Case Presentations	7
Summary	10
References	10

Cover Illustration by Scott Holladay

Copyright 2000, Turner White Communications, Inc., 125 Strafford Avenue, Suite 220, Wayne, PA 19087-3391, www.turner-white.com. 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, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of Turner White Communications, Inc. The editors are solely responsible for selecting content. Although great care is taken to ensure accuracy, Turner White Communications, Inc. will not be liable for any errors of omission or inaccuracies in this publication. Opinions expressed are those of the authors and do not necessarily reflect those of Turner White Communications, Inc.

next page ↓

Cardiology Volume 6, Part 1 |

HOSPITAL PHYSICIAN®

CARDIOLOGY BOARD REVIEW MANUAL

Anticoagulant Therapy for Coronary Heart Disease: Case Studies

Series Editor:

W. Robert Taylor, MD, PhD

Assistant Professor of Medicine

Director, Cardiovascular Disease Training Program

Division of Cardiology

Department of Medicine

Emory University School of Medicine

Atlanta, GA

Contributing Author:

A. Maziar Zafari, MD, PhD

Assistant Professor of Medicine

Division of Cardiology

Department of Medicine

Emory University School of Medicine

Staff Cardiologist

Atlanta Veterans Affairs Medical Center

Decatur, GA

I. INTRODUCTION

Although the rate of cardiovascular mortality during the past 3 decades has decreased substantially, atherosclerotic coronary heart disease (CHD) remains the leading cause of death and disability in the United States.¹ This continuing decrease in CHD mortality is directly related to improved therapies for acute coronary syndromes—unstable angina pectoris, acute myocardial infarction (MI), and chronic manifestations of CHD (stable angina, ischemic congestive heart failure [CHF])—as well as to favorable modifications of major coronary risk factors. Anticoagulant agents can decrease risks of occlusive vascular events by reduction of certain coagulation factors, by inhibition of thrombin formation and activity through activation of antithrombin, and finally by direct inhibition of both free thrombin and thrombin bound to fibrin. Uncertainty remains among health care providers regarding the appropriate uses of these agents in different categories of patients.

This review describes how anticoagulant agents can be used to manage patients with CHD based on data from selected major randomized controlled trials that support recent recommendations of the American College of Cardiology/American Heart Association

(ACC/AHA)²⁻⁴ and the American College of Chest Physicians (ACCP).⁵ It also provides clinicians with information for the use of anticoagulant agents in the prevention of CHD. This review does not discuss randomized controlled trials and recommendations regarding the use of anticoagulant agents with percutaneous coronary interventions, which deserve a separate and thorough review. The case studies show how the information discussed in this review translates into day-to-day practice. The first part of this review described antiplatelet agents (“Antiplatelet Agents in Coronary Heart Disease: Case Studies”) and was published in Volume 5, Part 6, of the *Hospital Physician Cardiology Board Review Manual*.

II. ANTICOAGULANT THERAPY

ANTICOAGULANT AGENTS

Oral anticoagulants produce their anticoagulant effect by interfering with the cyclic interconversion of vitamin K and its 2,3 epoxide through inhibition of vitamin K epoxide reductase and possibly vitamin K reductase. In addition, the vitamin K antagonists impair the function of protein C and protein S, which are