

HOSPITAL PHYSICIAN®

INTERNAL MEDICINE BOARD REVIEW MANUAL

PUBLISHING STAFF

PRESIDENT, GROUP PUBLISHER

Bruce M. White

EDITORIAL DIRECTOR

Debra Dreger

SENIOR EDITOR

Miranda J. Hughes, PhD

ASSISTANT EDITOR

Rita E. Gould

EDITORIAL ASSISTANT

Kara V. Warner

EXECUTIVE VICE PRESIDENT

Barbara T. White, MBA

EXECUTIVE DIRECTOR

OF OPERATIONS

Jean M. Gaul

PRODUCTION DIRECTOR

Suzanne S. Banish

PRODUCTION ASSOCIATES

Tish Berchtold Klus

Mary Beth Cunney

PRODUCTION ASSISTANT

Stacey Caizzo

ADVERTISING/PROJECT MANAGER

Patricia Payne Castle

MARKETING MANAGER

Deborah D. Chavis

NOTE FROM THE PUBLISHER:

This 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.

Case Studies in Type 2 Diabetes; Domestic Violence: A Case Study

Series Editor: Richard J. Simons, MD, FACP

Professor of Medicine, Assistant Dean for Medical Education, Associate Director, Internal Medicine Residency Training Program, Staff Physician, Milton S. Hershey Medical Center, Pennsylvania State University College of Medicine, Hershey, PA

Contributors:

Karen S. Bell, MD

Assistant Professor of Medicine, Division of General Internal Medicine, Pennsylvania State University College of Medicine, Milton S. Hershey Medical Center, Hershey, PA

Lawrence H. Jones, MD

Assistant Professor of Medicine, Division of General Internal Medicine, Pennsylvania State University College of Medicine, Staff Internist, Milton S. Hershey Medical Center, Hershey, PA

Noel H. Ballentine, MD

Associate Professor of Medicine, Division of General Internal Medicine, Milton S. Hershey Medical Center, Pennsylvania State University College of Medicine, Hershey, PA

Table of Contents

Chapter 1—Case Studies in Type 2 Diabetes 2

Contributors: Karen S. Bell, MD
Lawrence H. Jones, MD

Chapter 2—Domestic Violence: A Case Study 12

Contributor: Noel H. Ballentine, MD

Cover Illustration by Christie Grams

Copyright 2002, 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 the editors take great care 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.

Chapter 1—Case Studies in Type 2 Diabetes

Karen S. Bell, MD, and Lawrence H. Jones, MD

I. INTRODUCTION

Type 2 diabetes is one of the most common illnesses treated by primary care practitioners and specialists. The disease affects about 16 million people in the United States alone; another 13 million North Americans have impaired glucose tolerance.¹ Nearly 20% of the US population older than 65 years has type 2 diabetes.² The prevalence of type 2 diabetes is increasing as a result of increasing rates of obesity, decreasing levels of physical activity, changes in food consumption, and the aging of the population.³ Type 2 diabetes is the leading cause of blindness and end-stage renal failure; furthermore, type 2 diabetics have 2 to 4 times the risk for myocardial infarctions and cerebrovascular accidents.¹ Neuropathy, whether autonomic or peripheral, occurs in roughly 50% of all type 2 diabetics.¹ The cost of treating type 2 diabetes with its associated morbidities exceeds \$100 billion per year.¹

Type 2 diabetes is a disease that affects insulin production and effectiveness. The current oral medications work by targeting these underlying defects. With the advent of many new diabetic agents during the past decade, oral treatment for type 2 diabetes has become more complex. Diet, exercise, and weight loss remain the mainstay of treatment; however, pharmacologic therapy is usually necessary for adequate glycemic control. The United Kingdom Prospective Diabetes Study (UKPDS) demonstrated the progressive nature of the disease and showed that the incidence of microvasculature complications is reduced with aggressive, intensive therapy that uses even tighter goals for glycemic therapy.⁴ These results confirm the findings of previous studies, which show a correlation between glycemic control and microvascular complications. Epidemiologic analysis of UKPDS data also revealed a significant association between glycemic control and cardiovascular morbidity/mortality. With such strong beneficial evidence for tight glucose control and numerous medications available for treating diabetes, it is imperative that physicians are familiar with the available medical regimens in order to achieve optimal patient care.

This article briefly reviews pathophysiology, diagnostic criteria, and screening recommendations for type 2 diabetes, followed by a more extensive review of therapy with the currently approved oral agents. Insulin therapy is beyond the scope of this article, but it can be used either alone or in combination with the oral medications.

II. PATHOPHYSIOLOGY

Type 2 diabetes mellitus is a chronic metabolic disease characterized by hyperglycemia as well as by microvascular and macrovascular complications that substantially increase the morbidity and mortality associated with the disease. Type 2 diabetes results from defects in insulin secretion, insulin sensitivity, and hepatic glucose output. Hepatic gluconeogenesis is increased and suppression of hepatic glucose production is impaired post-prandially. Insulin-mediated glucose uptake by skeletal muscle, adipose tissue, and hepatic cells is also impaired, which is referred to as insulin resistance.¹

Insulin resistance may exist before overt hyperglycemia if pancreatic β -cells compensate for the defect by producing excessive amounts of insulin.⁵ Hyperglycemia develops as the degree of insulin resistance progresses and pancreatic β -cell function declines. Insulin resistance leading to hyperinsulinemia also is associated with hypertension, truncal obesity, and dyslipidemia, which further compound the cardiovascular risk.⁶ The combination of impaired pancreatic insulin secretion, increased hepatic glucose output, and peripheral insulin resistance all contribute to abnormal glucose metabolism and to loss of glucose homeostasis.

III. CASE PATIENT I

PRESENTATION

Patient 1 is a 50-year-old white woman who presents for a routine physical examination; she does not have any complaints. Her family history is pertinent

Chapter 2—Domestic Violence: A Case Study

Noel H. Ballentine, MD

I. INTRODUCTION

Domestic or family violence is a general term encompassing child abuse, elder abuse, and intimate partner/spousal abuse (including date rape). Basic knowledge about domestic abuse is necessary for physicians in almost all practices. This information should include the epidemiology of domestic violence and its effects on health as well as how to obtain the history of domestic violence and document the findings. In addition, physicians should be able to access the resources available to women suffering from abuse, particularly shelters and counseling. For many physicians, referral is the major option and can be done easily and efficiently. In this way, physicians can concentrate on what they do best: support the patient and render medical care.

This review focuses solely on intimate partner/spousal abuse (which is simply referred to as domestic violence in this review). A case patient is included to illustrate some of the features of domestic violence as well as provide physicians with the means of managing abused patients.

GENERAL PRINCIPLES

Definitions

Intimate/spousal abuse is defined as a pattern of assaultive and coercive behaviors used in the context of dating or intimate relationships;^{1,2} this definition emphasizes that domestic violence is not random violence, violence brought on by strangers, or the result of someone losing his or her temper. Alpert and Albright put this into perspective in the *Seminar Series*:²

“If one views violence as the intentional use of power to exert and enforce control over a less powerful individual or group, its presentation as child abuse and neglect, elder abuse, abuse of the disabled, dating violence, sexual assault, gang conflict and even civil or international warfare begins to become clearer and more understandable (but certainly not more acceptable).”²

In this context, the intimate partner may be a marriage partner, a separated or divorced partner, or a dating or cohabiting partner. It is not unusual for abuse to start, escalate, or continue after separation from a relationship. In an equitable relationship, there is give and take regarding decision making, communication, and support. With do-

mestic violence, the behaviors of the perpetrator serve to intimidate and subjugate the victim.

Intimate partner abuse primarily affects women; more than 90% of cases involve women who are abused by men, although physicians also should be aware that men are abused by women and that both men and women in homosexual relationships can be subjects of domestic abuse. Because women are more likely to be abused and because they sustain more serious injuries,³ it has become conventional to refer to the victim (also called the survivor or sufferer) of abuse in the female gender and to the perpetrator in the male gender.⁴

Incidence

As with other forms of domestic violence, intimate partner/spousal abuse is a pervasive health problem affecting all levels of society; an estimated 25% of women older than 18 years in the United States are abused by their spouses⁵ (Table 7). Unfortunately, the true incidence of domestic violence is not known because most abused patients do not acknowledge the underlying problem of abuse to their healthcare providers. Additionally, physicians and other care providers may not be able to readily identify abuse victims or may experience barriers in addressing suspected abuse. These issues will be discussed further (see Section IV, “Barriers to Disclosing Abuse”).

Features of Abuse

As previously noted, domestic violence is dangerous and patients are hurt. Abuse can be physical, sexual, emotional, psychological, or financial. Often the perpetrator uses a combination of tactics, although typically one is predominant. Frequently, the abuse escalates (ie, the violence worsens over time), although there may also be periods without any abuse. Briefly, the pattern of violence in abusive relationships is cyclic, regardless of the type of abuse (Figure 2). Therefore, a calmer period does not indicate that abuse has halted permanently.

Abused women often say that although the physical injuries are bad (and may be lethal), the emotional injuries are more upsetting. The loss of self worth and the feeling of helplessness that results from continued controlling behavior and belittlement persist long after the physical injuries have healed. In addition, children are affected either physically (because 50% of these