See TARGETED THERAPY available online at www.studentconsult.com

CHAPTER 3

Inflammation and Repair

CHAPTER CONTENTS

Overview of Inflammation: Definitions and General Features

Inflammation is a response of vascularized tissues to infections and damaged tissues that brings cells and molecules of host defense from the circulation to the sites where they are needed, in order to eliminate the offending agents. Although in common medical and lay parlance, inflammation suggests a harmful reaction, it is actually a protective response that is essential for survival. It serves to rid the host of both the initial cause of cell injury (e.g., microbes, toxins) and the consequences of such injury (e.g., necrotic cells and tissues). The mediators of defense include phagocytic leukocytes, antibodies, and complement proteins. Most of these normally circulate in the blood, from which they can be rapidly recruited to any site in the body; some of the cells also reside in tissues. The process of inflammation delivers these cells and proteins to damaged or necrotic tissues and foreign invaders, such as microbes, and activates the recruited cells and molecules, which then function to get rid of the harmful or unwanted substances. Without inflammation, infections would go unchecked, wounds would never heal, and injured tissues might remain permanent festering sores. In addition to inflammatory cells, components of innate