Spine Disorders

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Medical and Surgical Management

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To my wife Ruth, for her steadfast love and support. To my children Joseph and Ruthie, who continually inspire me to look at the world in new ways.

H. Gordon Deen, M. D.

To past, present, and future patients with spine disorders.

J. D. Bartleson, M. D.

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Preface

It is fair to ask why another spine textbook is needed, especially one authored by a neurologist and a neurosurgeon. There are several reasons.

First, spine disorders are very common, cause considerable morbidity, and have a tremendous economic impact.

Second, the evaluation of a patient with back and limb pain can be challenging. While a clear-cut diagnosis is often possible, in many cases the diagnosis is uncertain. Even if a diagnosis can be established, there are typically multiple treatment options available. Experts disagree about the best course of treatment for an individual patient, and many therapies are only partially helpful. The uncertainties and frustrations associated with the diagnosis and treatment of spine conditions are felt by providers, patients, their families, employers, and payers.

Third, many healthcare providers have limited training in spine disorders. As a result, many providers are ill prepared to manage spine patients who often comprise a significant segment of their practice.

Fourth, we believe that the optimal management of the patient with spine pain, limb pain, or both involves a multidisciplinary approach. Neurologists and neurosurgeons have a long tradition of working together as a team in the evaluation and treatment of many neurologic conditions including tumors, cerebrovascular disease, and spine disorders. A neurologic and neurosurgical perspective is important because most of the spine problems that require surgery involve compression of nervous tissue (the spinal cord, individual nerve roots, or the cauda equina). Fifth, while most spine textbooks now available are written by and for surgeons, the bulk of spine care is provided by non-surgeons. We believe a concise book targeted at the full range of providers who care for spine patients is needed.

This book grew out of a course that we have given for several years at the Annual Meeting of the American Academy of Neurology. The book describes the anatomy, physiology, and pathophysiology of the spine. It describes how to evaluate clinically and with laboratory and imaging studies the patient with disease affecting the cervical, thoracic, and lumbar levels of the spine. We describe available medical and surgical treatment options for the patient with various spine disorders. The book can be read from cover to cover or piecemeal as one encounters specific spine symptoms or considers potential surgical procedures. The goal of the book is not to teach the nonsurgeon how to do spine surgery but to inform the reader when surgery should be considered, what surgical interventions can be offered, and the risks and benefits that are involved. We hope and believe that this book will benefit all healthcare providers who see patients with spine disorders.

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H. G. D.