

Preface

In the last decade we have seen an explosive growth in the development of minimally invasive spinal (MISS) procedures. The goal of these procedures is to treat patients using methods that minimize operative trauma to surrounding normal anatomic structures to relieve symptoms. In achieving this goal, patients can return to their normal activities of daily living quickly with minimal pain or discomfort. This goal seems reasonable, yet many MISS procedures have a “gimmicky” reputation, mostly because of the high-tech, costly equipment requirements that often produce little improvement in patient outcomes. Until fairly recently, minimally invasive spinal procedures have been minimally effective because of the inadequate visualization of compressed neural elements or inability to sufficiently remove bony pathologic processes. Minimally invasive refinements in operative technique are a natural evolution of spinal surgery and are mirrored by very effective minimally invasive developments in other specialties, such as the laparoscope in abdominal surgery and the arthroscope in orthopedic surgery.

Major advancements have been seen in the development of retractors and optics that allow for less traumatic approaches to spinal pathology. It only seems logical that those approaches that reduce muscle, ligamentous, and bony destruction would also result in less postoperative pain and quicker patient recoveries.

Patients are becoming increasingly more savvy about treatment options, thanks in no small part to information available on the Internet, and are demanding less painful and less invasive procedures to treat their spinal conditions. They are actively looking for procedures that will minimize their postoperative pain, relieve their symptoms, and allow them a full, quick recovery. Patients believe that the technology is available; they just want to ensure they have a capable physician who can use it effectively and safely.

This dramatic increase in effective minimally invasive spinal procedures has led to an entirely new field of spinal surgery—outpatient spinal surgery. The purpose of this textbook is twofold—to present techniques perfected by leaders in this field and to enable physicians to develop minimally invasive spinal programs.

The textbook is divided into three parts. Part I, “Basic Considerations,” includes chapters on the history of ambulatory surgery, how to set up an ambulatory spinal center, the business aspects of managing an ambulatory spinal surgery center, and the services these centers can provide spine patients. Patient education is a key element to successful outpatient spinal surgery and is discussed in this part. Part II reviews various operative techniques, both anterior and posterior approaches from the cervical to lumbar spine, that have been conducted on an ambulatory basis. Many of these chapters have been written by some of the world’s leading experts who developed the techniques. Newly developed minimally invasive spinal implants

that have not yet received FDA approval are also presented as examples of minimally invasive instrumentation that reduce iatrogenic spinal instability by minimizing the need to remove normal ligaments, bone, and muscle. Part III addresses complications and outcomes analysis. It is important that patient outcomes be measured objectively to determine if indeed these new techniques are effective for each surgeon's particular clinical practice.

Illustrations are included in most of the technical chapters to take the reader step by step through the procedures. Many of these illustrations are of the most commonly treated spinal pathology and are intended as teaching aids for residents, health care givers, and patients. The orientation of the illustrations is similar to that viewed by the operating surgeon and may help clarify the primary steps taken in each of these procedures.

As more surgeons gain experience and become comfortable with using these minimally invasive spinal surgery techniques, we believe outpatient spinal surgery will eventually become the standard of care. Ultimately, we hope that *Outpatient Spinal Surgery* will ensure better spinal care for patients and help reduce the suffering, disability, and cost associated with the treatment of spinal pathology.

Mick J. Perez-Cruet, M.D., M.Sc.

Richard G. Fessler, M.D., Ph.D.