Preface

The spine is a "scaffold" for the erect human body and spinal cord that allows for information to travel between the central nervous system and the peripheral movement executers. Without good signal transition or intact scaffold, a human being cannot walk efficiently. Last century has seen a growing interest and need by many surgeons to strengthen collapsing scaffold and to improve relay of neural signals along the spinal cord. Craniovertebral junction represents the ultimate link between the head and spine with its absolute need for structural support as well as mobility.

Historically, orthopedic surgeons and neurosurgeons became intimately involved in the care of the spinal patient, rarely working together. One was more interested in the strength and shape of the scaffold; the other was more concerned about the quality of information passing through the spinal cord and assuring it remained free from compression. The two differing approaches resulted in two schools of spinal practice: one perfecting reconstructive and fusion techniques, the other mastering microsurgical decompressive aspects of spinal care. Both sides failed to realize that for a patient to enjoy a functional, ambulatory life, they are both necessary. The multilevel decompressive procedure that potentially results in spinal instability may require good structural support with anatomical alignment. The era of admiration of beautiful constructs without respect for neural structures or microsurgical decompression without the thought for good structural support is over. Spine surgery has undergone tremendous development in last 30 years allowing surgeons to operate safely and effectively in previously forbidden or dangerous areas. Development of imaging modalities, surgical instruments, implants, intraoperative monitoring, and anesthetic techniques allowed for spinal techniques to flourish with improved safety and ambulating patients! The new generation spine surgeon is here to stay and rid us off the artificial separation between structure and nervous system.

Our daily work clearly demonstrates that there is a whole array of common spinal problems treated frequently. On the other hand, there are certain, more complex diagnoses even in spinal care that require special expertise, skills, and equipment.

There are still some super specialized topics which, in our opinion will remain under the wings of original specialties. It is the orthopedic correction of thoracolumbar deformities namely those congenital and neurosurgical microsurgery of spinal cord pathologies. All the other surgically treatable diseases would encompass the "general spine surgery." Spinal trauma, degenerative disorders, tumors, and inflammatory diseases all need fully devoted people able to be at service in a 24 h regime.

This book, based on our own experience with nearly 300 upper cervical spine reconstruction surgeries, should serve to all those who would not only like to begin with surgery in this region but also to those who are already involved, offering them

a summarized information about the current possibilities of upper cervical spine reconstruction and a step by step guide of modern potential treatment options for disorders in the CVJ.

This book would not be complete without the beautiful illustrations of Petr Polda and radiographic contributions by Dr. Ladislav Endrych, Chairman of the Radiology Department in Regional Hospital Liberec. Last but not least, our thanks goes to Drs. Jan Hradil, Vladimir Benes, Pavel Buchvald, Radek Frič (currently Rikshospitalet Oslo), Pavel Barsa, Robert Frohlich, Lubomir Jurak, Miroslav Kaiser, and Radim Brabec for their significant contributions to this book. Their relentlessness reflects the team spirit of the Neurosurgery Department in Liberec, Czech Republic.

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