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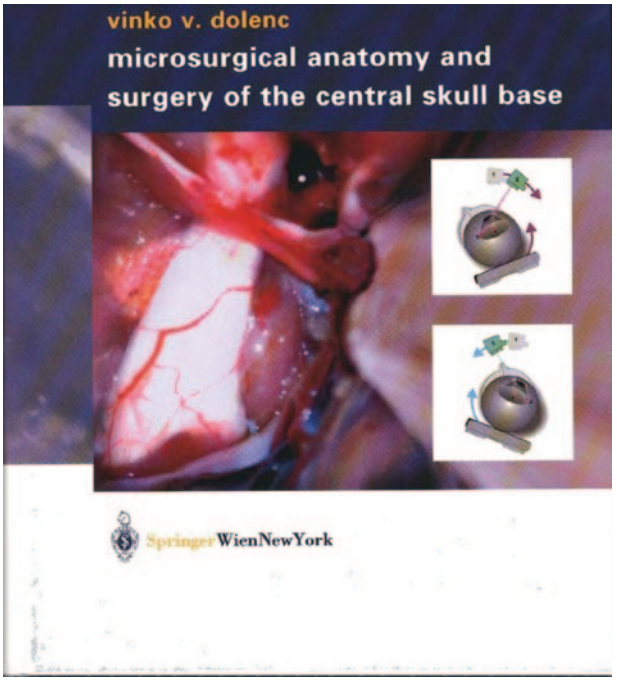
Book Review

Microsurgical Anatomy and Surgery of the Central Skull Base
Vinko V. Dolenc. Vienna: Springer-Verlag; 2003. 306 pages, 189 illustrations. $225.



The author of this book is widely considered the foremost international expert on the surgery of the cavernous sinus. As he states in the preface of his work, this book was written in an attempt to reflect in greater detail the evolution of anatomic and surgical concepts since the publication of his landmark *Anatomy and Surgery of the Cavernous Sinus,* in 1989. The book consists of more than 300 pages, divided into four main sections.

Section 1 addresses the details of skull base anatomy. This is divided into a short section dealing with anatomy of the individual structures of the parasellar space. It then follows a classical description of the surgical triangles in the parasellar space. This latter section is heavily illustrated with nicely annotated, color cadaveric dissections. The quality of the dissections is excellent, but my only criticism of the color photographs is that they are slightly dark. This, however, does not interfere with the clarity of exposition. Section 1.3 follows the course of the internal carotid artery in relation to the anatomic triangles. Section 1.4 studies the relationship of the sella, again through color cadaveric photographs. Section 1.5 appropriately illustrates the venous system of the parasellar space.

Section 2 details the elements of the epidural approach approaching the parasellar space and adjacent regions. This section probably represents the first detailed exposition of the technical modifications introduced by Dr. Dolenc since his original edition in the 1980s. Noteworthy are his use of the true osteomuscular flap in an effort to preserve vascularity of the temporalis muscle as well as an expanded dissection of the posterior superior orbital fissure to allow easier drilling of the anterior clinoid process. The author believes that his technical modifications to the original approach are more respectful of the concept of avoiding an intradural exploration for an extradural lesion and, thus, result in better brain preservation.

Section 3 details the author's surgical techniques and results as they relate to the surgical technique of carotid ophthalmic aneurysms, aneurysms of the parasellar space, carotid-parasellar fistulas, and, finally, basilar artery aneurysms. A brief tabulation of surgical results at the end of each subsection is presented. Intraoperative photographs and preoperative and postoperative angiograms are used well to supplement case examples. The tabulation of postoperative complications is brief and would have benefited from a more detailed explanation of morbidity and follow-up.

Section 4 deals with tumors originating in the central skull base, and, as expected, the most common pathology discussed is meningiomas, in addition to pituitary adenomas, trigeminal neurinomas, chordomas, chondrosarcomas, chrondromas, cavernomas, craniopharyngiomas, and malignant and other rare tumors. The author's experiences comprise >800 meningiomas. He subdivides meningiomas by specific site of origin and tabulates completeness of resection, results, and complications by location. The author's experience is so varied that he is able to subdivide even anterior clinoidal process meningiomas into four subtypes. For petroclival meningiomas, considered by many as the most difficult intracranial meningioma, the author's bias toward anterior transpetrous approach is very evident as opposed to the presigmoid posterior transpetrous approaches recommended by other prominent skull base surgeons. The section on pituitary adenomas extending beyond the sella has a very nice series of surgical schematics tracing step-by-step the philosophy of this aggressive surgical approach.

With regard to thoroughness of the references, one can clearly state that the list is brief, but certainly includes the most relevant publications to the specific topic. This book is a unique publication that really cannot be compared with other publications of the type because it reflects the lifetime surgical experience of a surgical pioneer who is noted primarily for his courage and expertise in operating in and around the parasellar space—previously called the cavernous sinus. It is therefore a very personal account of how the author thinks skull base lesions should be dealt with. It is unlikely to be replicated by other surgeons,

particularly with the advent and expansion of interventional neuroradiologic techniques and radiosurgery. This book is truly historical, because it probably represents the highest surgical state of the art that has been reached and, frankly, likely to be reached in the parasellar space. Consequently, this publication will be hugely appreciated primarily by neurosurgeons who have an interest in skull base and/or cerebrovascular surgery. In addition, it will be of value to neuroradiologists who wish to possess a reference on cadaveric anatomic depictions of the parasellar space as well as have an appreciation of surgical techniques and results in vascular and tumorous lesions of the central skull base, in the hands of an international expert. The detailed surgical techniques, however, are unlikely to be of interest to a general neuroradiologic audience. In addition, we have no doubt that most endovascular interventional therapists would not share the author's enthusiasm about open surgery for vascular lesions of the parasellar space.