

Foreword

Perspective on Importance of Orbital SurgeryJoseph C. Maroon¹¹ Department of Neurological Surgery, Heindl Scholar in Neuroscience, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, United States

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In 1973, Dr. John Kennerdell, ophthalmologist and oculoplastic surgeon at the University of Pittsburgh Medical Center reached out to me, a new junior faculty neurosurgeon, to assist him in the removal of an intraorbital optic nerve meningioma. The operation was a disaster. The patient, the wife of a physician, awoke with complete ipsilateral loss of vision. In agonizing and pondering the technical problems encountered, we both realized there had to be a better way. We discussed the then current approach to orbital tumors and realized there existed silos in ophthalmology and neurosurgery. The burgeoning technical innovations becoming available had not yet been applied to surgery in the orbit in either specialty.

Having recently completed a fellowship in micro neurosurgery at the University of Vermont, we charted a new course. We discussed applying minimally invasive microsurgical approaches and instrumentation to orbital surgery. We immediately developed a self-retaining orbital retractor and modified various neurosurgical micro instruments specifically for use in the orbit. Rather than loupes, the operating microscope became our tool. Concurrently, we utilized fine needle aspiration biopsies pioneered by Jack to help in patient selection. We then took advantage of the exploding diagnostic field of neuroimaging of the orbit which included, ultrasound, computed tomography scans, and subsequently magnetic resonance imaging.

We subsequently devised surgical approaches to the orbit predicated on neuroimaging and the relationship of tumors to the optic nerve and their precise location in the orbit, orbital apex, or the presence of bone involvement or intracranial extension. We utilized all of the latest adjuncts subsequently to treat over 1,000 orbital and periorbital tumors in patients referred nationally and internationally.

It was no longer appropriate for a neurosurgeon to utilize a craniotomy for all orbital tumors. Nor was it acceptable for an ophthalmologist to use exclusively an orbitotomy to the exclusion of a cranial or combined approach. We emphasized

the necessity of a team approach when indicated—the neuro-ophthalmologist, neurosurgeon, ear-nose-throat (ENT) surgeon, neuroradiologist and neuropathologist—for optimal patient outcome and care.

In 1976, Dr. Kennerdell also instituted a Fellowship program for ophthalmologists and orbital plastic surgeons, several of whom are contributing chapters to this book. Until his retirement in 2010 he had trained over 37 fellows (including three women) who have specialized in orbital surgery and who are now leaders in their field at major centers and universities throughout the United States.

Dr. Kennerdell, together with several fellow orbital surgeons in the 1980s formed the International Society of Orbital Surgeons dedicated to the dissemination of advancements in diagnosing and treating lesions in and around the orbit. It also has provided a wonderful international forum for disseminating multispecialty individual observations and experiences in this area to more quickly advance the science.

Nearly concurrently, the North American Skull Base Society was founded (in 1989) as a professional medical society to facilitate communication worldwide between individuals pursuing clinical and research excellence in skull base surgery. In the same time frame, ENT surgeons introduced endoscopic endonasal techniques to skull base surgery. Subsequently, endoscopy has become invaluable for accessing orbital lesions as well, especially in difficult to reach locations such as the orbital apex.

Heraclitus (575–435 BC) a Greek philosopher stated, “One can never put one’s foot into the same river twice for it is constantly moving and changing.” “Change,” he said, “is the only constant in life.” Similarly, surgical techniques and approaches to the orbit are also dynamic not static. They are constantly evolving with the exponential advances in surgical technology, instrumentation, and imaging.

This volume, however, provides the most current repository available on the anatomy, pathology, and surgical approaches, including endoscopy of the orbit and skull

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base. Experienced internationally recognized orbital and skull base surgery specialists share their expertise and detail their therapeutic errors in judgment and technique, lessons learned, and recommendations. This special edition repre-

sents the summation of all that has gone before and incorporates the latest innovations as a major resource for the novice as well as the most senior ophthalmic, ENT, and neurologic surgeon.