Introduction

Cranial nerve surgery

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In this issue of *Neurosurgical Focus*, we have compiled a group of interesting papers related to anatomy, physiology, pathology, and surgery of the cranial nerves. We were very pleased to receive many more submissions of excellent papers on this topic from which we had the difficult task of having to select, because of limitations in space, only 8 papers.

Rodgers and colleagues give an excellent review of the syndrome of short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing. In the authors' case, the syndrome was caused by an epidermoid tumor of the cerebellopontine angle that was clearly compressing the trigeminal nerve. We found this case report interesting because the etiology of this syndrome has not been clear, and this paper suggests that compression of the trigeminal nerve may be one of the causes. We thought that the excellent review of this topic the authors provide to us is important because neurosurgeons are so frequently called upon to treat trigeminal neuralgia, and we must be able to differentiate that condition from this interesting syndrome.

Ross and colleagues report on 4 patients with rare facial nerve tumors and use the opportunity to present us with a nice review of the literature on the clinical syndrome, imaging characteristics, and surgical treatment of these tumors.

Wang and colleagues from the University of Pittsburgh review their extensive experience with microvascular decompression for hemifacial spasm and conclude that botulinum toxin injections, which many of these patients underwent for treatment of their spasms before microvascular decompression, had no impact on the results of this operation. This finding is important because nowadays most patients have already had this type of palliative treatment before undergoing microvascular decompression. The second paper by this group of au-

thors (Thirumala et al.) is a careful study of neurophysiological monitoring during microvascular decompression for hemifacial spasm; essentially, the authors conclude that changes in interpeak latency of brainstem auditory evoked potentials during surgery do not increase the odds of postoperative hearing loss and should not be used as an "alarm criteria" during microvascular decompression.

Kshetry and colleagues present a nice historical review of the early studies of the anatomy of the petroclival region and the contributions of Primo Dorello, an Italian anatomist, after whom the Dorello canal is named. Interestingly, it turns out that the canal now widely known by Dorello's name had been previously described 50 years earlier by W. Gruber. This paper also contains a nice review of anatomical studies of this region followed by a brief review of clinical implications.

Schmidt et al. present a case of a malignant peripheral nerve sheath tumor of the trigeminal nerve, which they used as an opportunity to review the literature and summarize very nicely a total of 36 cases of malignant peripheral nerve sheath tumors of the trigeminal nerve. As expected, these tumors usually present with altered facial sensation and/or facial pain, and it appears that aggressive resection followed by radiation therapy offers the best chance for survival.

Sarnthein and colleagues present another interesting paper concerning neurophysiological monitoring of facial nerve function during skull base surgery. In this careful study, the authors find that an intraoperative increase in the threshold for transcranial stimulation necessary to elicit a facial nerve motor evoked response is very specifically correlated with postoperative facial nerve dysfunction, and they suggest that such monitoring should be used in these operations in addition to the widely used direct electrical stimulation of the facial nerve.

This issue also contains a very nice review of the neurosurgical options for management of glossopharyngeal neuralgia by Rey-Dios and Cohen-Gadol. The authors conclude that microvascular decompression is an excellent option but that when a convincing neurovascular conflict is not found, section of the glossopharyngeal nerve and the upper rootlets of the vagus nerve is a satisfactory alternative.

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Disclosure

The author reports no conflict of interest.

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