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The Importance of Endoscopic Vascular Injury Training for Dealing with Disaster

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Editorial

In the past three decades, there have been considerable advancements in the field of skull base surgery. The methods of open skull base surgery have generally had a very positive impact on management of many challenging tumours and other complex lesions involving the skull base, from the initial scepticism of the specialty to its widespread acceptance as well as the subsequent acknowledgment of the limitations. The use of microsurgical methods, the creation of novel surgical procedures based on greater understanding of the pertinent anatomy, enhanced imaging, improved anaesthetic, and professional preoperative and postoperative care are only a few of the aspects that contributed to success in this discipline. Through this craniofacial resection (CFR), lesions in the paranasal sinuses and lesions affecting the extracranial and intracranial compartments of the skull base were better exposed. Following this, radiation and medical oncologists and plastic and reconstructive surgeons were added to the team, providing a holistic approach to the therapy of tumours that were previously believed to be inoperable or associated with considerable surgical morbidity. Patients with anterior skull base cancer were able to have more thorough resections thanks to cranial approaches, which also resulted in substantial increases in both overall and disease-specific survival and decreased rates of recurrence [1,2].

The treatment of inflammatory disorders and lesions confined to the sinonasal tract was revolutionised by the endonasal endoscopic skull base approach, which was derived from ideas adopted from the area of rhinology and functional endoscopic sinus surgery established in the 1980s. Initially, benign diseases and other nontumorous lesions involving the sinonasal tube that did not reach up to the anterior skull base were the only tumours that could be treated using an endoscopic approach. The first accounts of frontal craniotomies alone or in conjunction with pure endoscopic operations (the cranionasal approach) appeared in the late 1990s. Later, the method was used to a few specific instances of malignant tumours. There was a great deal of criticism from doctors who thought that endoscopic surgery after the publication of various series assessing small and intermediate-size cohorts of patients. Although they are a relatively recent development, these enlarged endoscopic methods have gained widespread acceptance and had a significant influence on both pituitary surgery and the overall field of skull base surgery. The benefits of this minimally invasive approach include a more direct anatomic route, no need for a craniotomy or facial incisions, less trauma to the brain and neurovascular structures, early devascularization of the tumour blood supply, improved visualisation of the pertinent anatomy, and better cosmetic results with quicker recovery times [2].

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A thorough understanding of anatomy, a multidisciplinary team of skilled endoscopists, and the use of a 2-nostril bimanual method that permits the use of microsurgical technique as performed in open operations are crucial requirements for success when adopting these approaches. An extended endoscopic endonasal transsphenoidal route was used to remove the tumour. No pedicled nasoseptal flap was intended to be used in the restoration of the front skull base since the tumour looked to involve the septal mucosa, including the right side. The right thigh was used to collect fascia lata for the correction of the skull base deformity. Bilateral middle turbinectomies, posterior septectomy, ethmoidectomy, large bilateral sphenoidotomies, and bilateral maxillary antrostomies were the key phases of the treatment. After the nasal tumour was removed, the lamina papyracea was cut out on both sides, and the anterior and posterior ethmoidal arteries on both sides were meticulously dissected and coagulated. The cribriform plate was resected jointly with osteotomy of the anterior fossa, which was the last step of the treatment [3,4].

Endoscopic surgery for paranasal and skull base lesions is increasingly being used and indicated. It has been universally established that these methods work as well as or better than open methods to treat benign paranasal sinus disease. With a few exceptions depending on anatomical considerations, repairs of CSF leaks, encephaloceles, juvenile angiofibromas, capillary hemangiomas, solitary fibrous lesions, and osteomas are only made with a pure endoscopic method. Open treatments have also been replaced by endoscopic methods for midline clival extradural tumours such chordomas. The excision of the anterior bony skull base and the nearby dura mater, which may be reached through the frontal sinus, clivus, and foramen magnum, has been added to the list of reasons for endoscopic surgery. The approach's lateral restriction. Concerns have persisted about the long-term outcomes of patients undergoing endoscopic procedures for malignancies, particularly with regard to the ability to achieve total resection with clear margins and the potential for increased risk of recurrence, despite the widespread acceptance of the endoscopic approach and early favourable results. The sole unequivocal contraindication to the endoscopic method, according to their analysis of the combined conventional and endoscopic procedures' outcomes in their own patient cohorts, was a malignancy's invasion of the soft tissues of the face. Highly vascular tumours, the requirement for orbital exenteration, lateral tumour expansion with penetration of the pterygomaxillary space or infratemporal fossa, and significant bilateral disease were relative contraindications [5].

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Conflict of Interest

The author reported no potential conflict of interest.

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