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Comparison of sitting position vs. non sitting position the resection of brain metastases in the posterior fossa: surgical and functional outcome in a contemporary cohort [Abstract]

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mandibular notch and via the infratemporal fossa to the clivus is feasible and provides wide exposure of the anterior brainstem region and represents an alternative route to lesions of the mid and lower clivus, anterior foramen magnum, and anterior brainstem.

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COMPARISON OF SITTING POSITION VS. NON SITTING POSITION THE RESECTION OF BRAIN METASTASES IN THE POSTERIOR FOSSA. SURGICAL AND FUNCTIONAL OUTCOME IN A CONTEMPORARY COHORT

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Background: For surgery of brain metastases, good immediate postoperative functional outcome is of utmost importance. Improved functional status can enable further oncologic therapies and adverse events might delay them. Pros and cons of either sitting or supine positioning for resective surgery of the posterior fossa are debated but contemporary data on direct postoperative outcome is rare. Aim of our study was to compare the functional outcome and adverse events of surgery for brain metastases in sitting vs. non sitting position in the direct postoperative setting.
Methods: We retrospectively compared surgery of metastases located in the posterior fossa over a 3-year period in two level-A neurosurgical centers. Either center performed surgery exclusively in sitting or non-sitting positioning respectively.
Results: Worse functional outcome (Karnofsky Performance scale) and functional deterioration was seen in the “sitting” group (coming from higher functional scores). We found significantly more “sitting” patients to deteriorate to a KPS $\leq$60%including four deaths (vs. one in non-sitting position). In this study, treating patients with brain metastases in sitting position resulted in a number needed to harm (NNH) of 2.3.In this study, we found sitting position for surgery of brain metastases to be associated with worse outcome and more adverse events.
Conclusion: We tend to recommend non-sitting over sitting position for surgery of brain metastases of the posterior fossa.

4.7 Endoscopic Techniques

BRAIN AND SPINE 2 (2022) 101190 101546
ENDOSCOPIC TRANSORBITAL APPROACH

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Background: Recently, the endoscopic approach to the orbit has been proposed as an alternative to the traditional ones for the treatment of selected spheno-orbital lesions. Its potential advantages reside in the minimal invasiveness on surrounding tissues and in the direct targeting to the orbital part of the lesions. Our aim is to share our experience on this approach, underlying the importance of preoperative evaluations and the nuances of the surgical technique.
Methods: We report a video summary of endoscopic transorbital removal of different spheno-orbital lesions.
Results: The endoscopic transorbital technique has allowed an extensive removal of many different spheno-orbital lesions and the decompression of the orbital structures. Patients satisfaction was good.
Conclusion: The endoscopic transorbital approach could be a suitable alternative to standard approaches in selected cases of spheno-orbital lesions.

BRAIN AND SPINE 2 (2022) 101190 101547
ENDOSCOPE ASSISTED RESECTION FOR CYSTIC CEREBELLAR HAEMANGIOBLASTOMAS

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Background: Haemangioblastomas are benign often cystic tumours occurring most commonly in the cerebellum. We describe resection of cystic cerebellar haemangioblastomas using an endoscope assisted technique.
Methods: We present a series of 9 cases and discuss the endoscopic technique for resection of cystic haemangioblastoma. Frameless neuronavigation was used in all cases. A small 1-1.5cm corticotomy lined with Surgicel and patties allows access to the peritumoral cyst. Using bimanual microsurgical techniques and the 30-degree rigid endoscope to provide visualisation, the mural nodule can be resected and the cyst cavity inspected.
Results: Complete resection of the mural nodule was achieved in all cases. One patient had post-surgery psuedomeningocoele requiring ventriculoperitoneal shunt. Hospital length of stay was short for the patients.
Conclusions: Endoscope assisted resection is a safe and effective technique for surgical resection of cystic haemangioblastoma.

BRAIN AND SPINE 2 (2022) 101190 101548
ENDOSCOPIC TRANSNASAL ODONTOIDECTOMY IN BASILAR INVAGINATION WITH VENTRAL CORD COMPRESSION DUE TO POSTERIOR DISPLACEMENT OF THE ODONTOID PROCESS

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Background: Microscopic odontoidectomy has been accepted as a standard procedure to treat nonreducible basilar invagination during the half past century. With the development of endoscopic techniques, transnasal odontoidectomy is considered as an effective and feasible method, with several advantages over the transoral approach.The necessity of posterior fixation after odontoidectomy should be considered in every single case.
Methods: We present the case of a 35-year-old male patient, known 2 years ago for neck pain and loss of strength in the upper limbs. Clinical data ofpyramidal involvement and right hemiparesis was noticed. MRI was performed showing basilar invagination with high cervical spinal cord compression by the odontoid process. A posterior approach was performed two years ago with decompression of the foramen magnum and occipito-cervical fixation. After 2 years of follow-up, the patient presented progressive dysphagia with hypoaesthesia in the left extremities and significant impairment of vibratory sensitivity. Neurophysiological study showed pyramidal and lower extremity involvement, as well as injury of the posterior cordonal pathway and worsening compared to previous control. Given the clinical worsening, transnasal endoscopic odontoidectomy was proposed, which was carried out jointly with ENT.
Results: We performed a binary endoscopic approach, conchectomy and resection of the posterior wall of the septum and picum rostrum. Resection of the vomer and part of the perpendicular plate of the ethmoid. Drilling of the posterior maxillary crest and extended sphenidotomy. Dissection of inferiorly pediculated nasopharyngeal flap with identification and drilling of the anterior arch of C1 and the lower clivus. Evidence of an important friable fibrous pannus adhered anteriorly and laterally to the odontoid process. Coagulation of the pannus and drilling of the eggshell-type odontoid process, preserving the posterior dura, extracting the odontoid tip. Coagulation and seading, with replacement of the pharyngeal flap over the defect.
Conclusions: Endoscopic odontoidectomy has proved a valid approach.

BRAIN AND SPINE 2 (2022) 101190 101549
SPHENOID SINUS PNEUMATIZATION IN MIDDLE EASTERN PATIENTS - IMPLICATIONS FOR ENDOSCOPIC SKULL BASE APPROACHES

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Background: Accessing the sphenoid sinus is the first step in virtually all regular and extended approaches to the skull base. In this study we evaluated the sphenoid sinus pneumatization patterns in the Middle East, according to the previously published classifications.
Methods: 228 thin-cuts CT scans were dynamically reviewed, to evaluate each sinus sagittal and coronal extent of pneumatization, as well as the number of septations in each patient.
Results: The conchal, presellar, sellar and postsellar types were present in 2.2%, 4.4%, 42.5% and 50.9% respectively. In terms of lateral pneumatization, the majority of the sinuses were of the intercanal type (72.8% on the right, 66.2% on the left), followed by the postrotundum type (19.7% on the right, 27.6% on the left) and the previdian type (7.5% on the right, 6.1% on the left). When lateral extension was present, the combined type was more common than the pterygoid