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PROGRAM

36. Microsurgery or endoscopy in treatment of skull base tumors?

Smolanka AV1,2*, Smolanka VI2,1, Leshak VI2,1, Havryliv TS1,2
1 Regional Centre of Neurosurgery and Neurology, Uzhhorod, Ukraine
2 Uzhhorod National University, Uzhhorod, Ukraine
asmolanka@gmail.com*

Background. Endoscopy is an emerging minimally invasive method of treatment in neurosurgery. In recent years, there is a trend towards endoscopic resection of skull base lesions due to development of extended endonasal endoscopic approaches. Endoscopic procedures were introduced to our practice at RCNN in 2015.

Objectives (or Aim). To compare the results of endoscopic versus microsurgical treatment of skull base tumors.

Methods. Retrospective analysis of 205 patients with tumors of the skull base treated in RCNN over the period of last 3 years (2018-2020) was performed. 216 surgical procedures for the treatment of skull base lesion were performed, 50 of them (23%) - fully endoscopic. Most common lesion was meningioma (36.1%), followed by schwannoma (24.9%) and pituitary adenoma (21%). Long-term morbidity and mortality ratio was calculated for each group, as well as for each histologic subgroup and tumor location.

Result. In general cohort postoperative 30-day morality was 2.4% with long-term morbidity of 6,8%. Combined mortality/morbidity index after microscopic procedures was 10.2%, while it was only 4% after endoscopic procedures. This finding can be related to the fact that majority of endoscopic surgeries were performed for the resection of pituitary adenoma (78%) and this lesion has significantly lower complication rate than other skull base tumors (4.6% vs. 10.5%).

Conclusion. Endoscopy is a valuable adjunct in an armamentarium of neurosurgeon, but it should be used in selected cases for patient benefit. It helps in improvement of overall treatment results when surgeon respects the anatomical limits of this technique. Microscopic resection remains the golden standard for resection of skull base tumors. Skull base surgeons should master both microscopic and endoscopic techniques, and learn how to combine them for further improvement of our results.

KEYWORD: Skull base, endoscopy, microscopy

37. Pearls and pitfalls in posterior cranial fossa hemangioblastomas surgery:

A. Sirko1,2
1 Public Institution, Mechnikov Dnipropetrovsk Regional Clinical Hospital, Dnipro, Ukraine
2 Dnipropetrovsk State Medical Academy, Ministry of Healthcare of Ukraine, Dnipro, Ukraine
neurosirko75@gmail.com

Introduction: Hemangioblastomas (HAB) are benign, rare central nervous system tumors. Hemangioblastomas represent 1.5% to 2.5% of all intracranial tumors and 7%–8% of all posterior cranial fossa (PCF) mass lesions. HAB develops sporadically; however, in about 33% of cases, it is a sign of a genetic multiple organ disease — the Von Hippel–Lindau (VHL) syndrome. According to the 2016 World Health Organization (WHO) Central Nervous System Tumors Classification, HAB is a mesenchymal, non-meningeal tumor (9161/1).

Objective: Analyze surgical PCF hemangioblastomas treatment. Reveal problematic and unsolved issues of this task and outline the ways of their solution.

Material and methods: The outcomes of brain tumor treatment in the Neurosurgery Clinic of Mechnikov Hospital, Dnipro, from 2014 to 2020 inclusive were analyzed. During