

## ENDOSCOPIC ENDONASAL SURGERY FOR MALIGNANT ANTERIOR CRANIAL BASE TUMORS

Jurlina Martin<sup>1</sup>, Jednačak Hrvoje<sup>2</sup>, Biloš Jerko<sup>1</sup>, Peterković Vjerislav<sup>2</sup>

1 - ENT Department, University Hospital Center, Zagreb, Croatia

2 - Department for Neurosurgery, University Hospital Center, Zagreb, Croatia

Surgery for malignant anterior cranial base tumors represents a challenge in the light of the fact that this space represents anatomically very demanding region. Tumor spread early involves vital structures of the orbit, cavernous sinus and central cranial base making its resection in that way very demanding. The resection of malignant anterior cranial base tumors usually results in communication between the sterile area of the anterior cranial fossa and contaminated space of the nose and paranasal sinuses. The purpose of reconstruction is to reconstitute the airtight and watertight barrier between the brain and the sinonasal cavity and to provide strong mechanical support to intracranial structures. Those are essential prerequisites needed in prevention of serious and possibly lethal postoperative complications. Surgical techniques that meet these requirements provide patients with a good postoperative quality of life and an optimal functional and aesthetic outcome. Open approach, using transracial, transvestibular or transcranial route, has been for years considered as golden standard technique in surgical treatment of malignant anterior cranial base tumors. In the last fifteen years, endonasal endoscopic surgical technique has considerably evolved in its indications. It has been for a long time considered legitimate surgical technique for treatment of only inflammatory diseases and for the reconstruction of limited cranial base defects resulting from spontaneous, iatrogenic or post traumatic CSF leaks. With the awareness that piecemeal malignant cranial base tumor resection is oncologically equally effective in comparison to en-bloc resection, and with the advent of new surgical tools (navigation, powered instrumentation) and reconstructive techniques (axial vascularised flaps), endonasal endoscopic approach is now considered as being equally effective and absolutely legitimate surgical technique in the treatment of malignant anterior cranial base tumors. In this presentation we will expose the essentials of endonasal endoscopic surgical technique that can be effectively used for the treatment of malignant anterior cranial base tumors, its indications and limits.