ENDOSCOPIC RESECTION WITH TRANSNASAL CRANIECTOMY IN THE MANAGEMENT OF SINONASAL MALIGNANCIES: SURGICAL TECHNIQUE AND MORBIDITY

A. Bolzoni Villaret, MD,* P. Nicolai, MD,* M. Bottazzoli, MD,* M. Bignami, MD,^ M. Turri Zanoni, MD,^ P. Battaglia, MD,^ P. Castelnuovo, MD^
*Department of Otorhinolaryngology, University of Brescia, Brescia, Italy.
^Department of Otorhinolaryngology, University of Insubria, Varese, Italy.

OBJECTIVE: This study reviewed the surgical technique of endoscopic resection with transnasal craniectomy (ERTC), its indications and morbidity in the management of selected sino-nasal malignancies.

METHODS: From April 1996 to December 2010, 265 patients affected by sinonasal malignant tumor were treated by endoscopic resection at two referral University Hospitals. Starting from 2004, 126 patients underwent ERTC, which extended antero-posteriorly from the frontal sinus to planum sphenoidale and latero-laterally from the nasal septum to the lamina papyracea or from papyracea to papyracea. Duraplasty was carried out using iliotibial tract and fat tissue harvested from the lateral thigh. All patients underwent a CT of the brain the day after surgery, and received antibiotic therapy for 5 days. Overall (O), disease-specific (DS), and recurrence-free (RF) survival were calculated with the Kaplan-Meier method.

RESULTS: The most frequent histologies were adenocarcinoma (57%) and olfactory neuroblastoma (16%). Eighty-seven (69%) patients were previously untreated. The overall complication rate was 10.3%. Cerebrospinal fluid leak was observed in 9 (7%) cases. The mean hospitalization time was 10.5 days (range, 5-32). Overall, 75 (60%) patients received adjuvant treatment. After a mean follow-up of 52.7 months (range, 12-169), 100 (79.3%) patients had no evidence of disease, with 5-year OS, DSS, and RFS of 82.6%, 85.7% and 77.9% respectively.

CONCLUSIONS: ERTC is a safe procedure with an acceptable complication rate, allowing to perform a wide resection of the dura with a correct assessment of its involvement. Only a few cases of malignancies extending intracranially require to combine an external subfrontal craniotomy.