Endoscopic endonasal skull base surgery: the Naples experience

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The endoscopic endonasal approach, initially reserved for sellar lesions, requires precise anatomical knowledge, technical skills and integrated appreciation of the pathology dealing with. During the last years, it has been gaining acceptance thanks to the evolving ideas and surgical tools aiming to lowering morbidity and mortality in a safe, feasible, and practical way. It has to be intended as the result of an evolutionary process rather than a revolutionary one, as a result of advances in medical sciences and surgical technique, innovations and technological progress. Nowadays, it represents a minimally invasive approach for several diseases interesting mostly the entire skull base - namely the suprasellar, retrosellar and parasellar spaces. The panoramic identification of the relevant anatomical landmarks allows the surgeon's orientation, despite the lack of 3D vision. Indeed, it offers the surgeon the opportunity to visualize safely and effectively the surgical field, thus providing the possibility to pass through a less noble structure (nasal cavity) in order to reach a more noble one (the brain with its neurovascular structures).

We have been employing the endoscopic endonasal technique since 1997 on circa 900 patients aiming to remove, initially, different sellar lesions and, recently, applying the so-called extended endonasal approach, to treat lesions involving the surrounding skull base areas.

We report our experience with the endoscopic endonasal approach to the skull base throughout a step-by-step depiction of the technique to access different compartments, detailing the anatomy as seen from the endonasal perspective, and describing possible complications and the techniques to manage them.