

The challenging Silent sinus syndrome

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The Silent sinus syndrome (SSS), first described in 1964 by Montgomery, is considered a relatively rare pathological entity, but it is presumably underdiagnosed and underreported. Terms such as imploding antrum and chronic maxillary atelectasis (CMA) have interchangeably been used to describe this syndrome, even though CMA has been postulated to represent either a different entity or a stage of evolution of the same disease. Bilateral involvement has been documented in a limited number of cases. Silent ethmoid sinus and silent frontal sinus syndromes have been described. The prevalent initial presentation is facial asymmetry with progressive “silent” painless unilateral enophthalmos and hypoglobus, and rarely diplopia. Isolated maxillary sinus hypoplasia must be differentiated. The etiopathogenesis is poorly understood and still under debate. According to the diagnostic criteria, SSS should spontaneously develop in absence of previous trauma or surgery. Secondary SSS to trauma or surgery, or to other causes like inflammation or tumor, has been documented in literature. The diagnosis relies on the CT, which typically shows unilateral hypoplastic and opacified maxillary sinus with inward bowing and remodeling of the sinus walls and inferior displacement of the orbital floor, an enlarged retroantral fat pad, a lateralized uncinat process, and a blocked ostiomeatal complex. The treatment of SSS aims at restoring the eye position and orbital floor height, to prevent progression of enophthalmos, to restore ventilation and drainage of the sinus. These objectives are achieved in single or two-stage surgery. The timing for management of the orbital floor is still under debate. The universally accepted treatment is surgical and usually accomplished by endoscopic sinus surgery. Associated middle turbinate hypertrophy and septal deviation must be previously addressed. Precise and gentle endoscopic removal of the obstruction of the ethmoid infundibulum, simply performing an inferior posteroanterior uncinectomy, since the uncinat process has constantly been found atelectatic and adherent to the lateral nasal wall, can reestablish the patency of the natural maxillary ostium. In our experience, following middle meatal antrostomy, long-term observation with staged orbital surgery, if required, is recommended. In this study, we present our cases with a focus on surgical stratagems developed in order to reduce the risk of injuring the orbit and to achieve long-lasting results.

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