Delayed Silent Sinus Syndrome Following Rhinoplasty

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Astract

Objectives:
Acknowledge silent sinus syndrome and detect it in early stage
Know how to prevent and manage silent sinus syndrome
Summay:
Detecting silent sinus syndrome cases is increasing. Proper diagnosis and treatment is necessary to prevent unwanted sequels.
The term silent sinus syndrome was defined as unilateral progressive enophtalmos secondary to the maxillary sinus opacification. Silent sinus syndrome is a rare clinical entity that progresses gradually due to the osteomeatal complex obstruction. Ostiomeatal blockage due to the damage of this complex is the most possible cause of maxillary sinus atelectasis.
We present four patients developed chronic silent sinus syndrome following nasal surgery. There has been only one prior report of silent sinus syndrome presenting after nasal surgery. Despite of this prior report, silent sinus syndrome in our four patients is a first report of delayed silent sinus syndrome following nasal surgery that all were developed more than one year after procedure. Lateral displacement of the end part of middle turbinate results in obstruction of the ostiomeatal and accumulation of secretions in closed sinus cavity. All of the patients had nasal dressing after surgery.
Our hypothesis is that the nasal dressing following nasal surgery may lead to lateralization of the end of middle turbinate. Silent sinus syndrome and enophthalmus can be a potential missed complication of septorhinoplasty which may present several years after surgery..

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INTRODUCTION

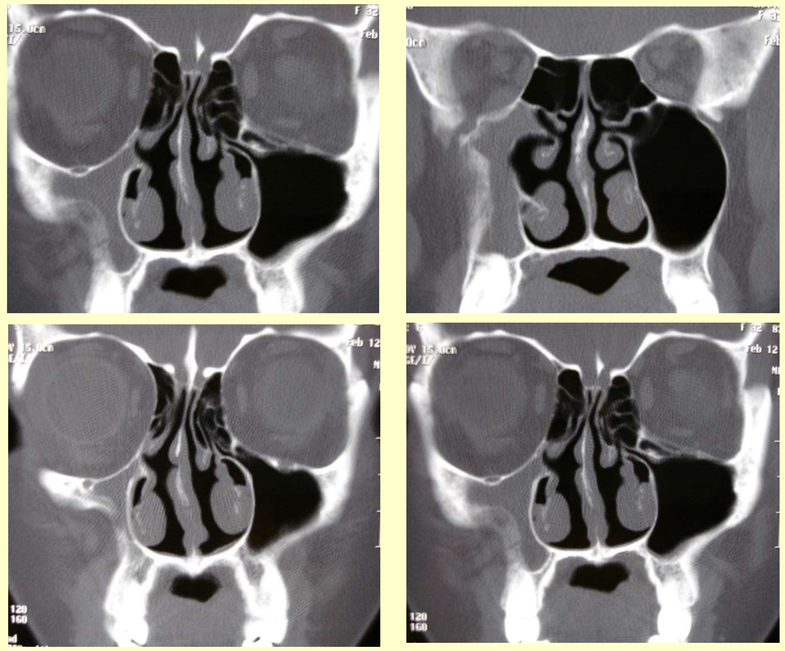
- Rare condition and a diagnostic challenge.
- The medical history is often noncontributory.
- This condition is characterized by unilateral spontaneous enophthalmos and hypoglobus due to increased orbital volume and retraction of the orbital floor.
- This occurs because of atelectasis of the ipsilateral maxillary sinus.
- *SIGNS:*
- Unilateral ptosis or retraction
- Deep superior sulcus
- Orbital asymmetry.

Silent Sinus Syndrome in Literature

- The first report of sss was an article by Montgomery in 1964.
- Two patients were reported who experienced diplopia and enophthalmos associated with collapse of the maxillary sinus.
- Both cases involved mucoceles of the maxillary sinus.
- In 1994 the term silent sinus syndrome was introduced by Soparkar et al in the ophthalmology literature.
- The authors described 14 patients with spontaneous unilateral enophthalmos and hypoglobus associated with "asymptomatic, bone thinning, maxillary sinus disease"

Silent Sinus Syndrome Pathophysiology

- Silent Sinus Syndrome is believed to originate from obstruction of the ostiomeatal complex of the paranasal sinuses leading to hypovetilation of the maxillary sinus.
- This enclosed cavity in certain settings is thought to develop air resorption, thus creating a suction effect of negative pressure within the maxillary antrum.
- The development of a negative pressure vacuum within the sinus, in turn, results in the accumulation of mucus into the antrum, subclinical inflammation and eventual collapse of the maxillary sinus through attenuation of the maxillary bony side walls.



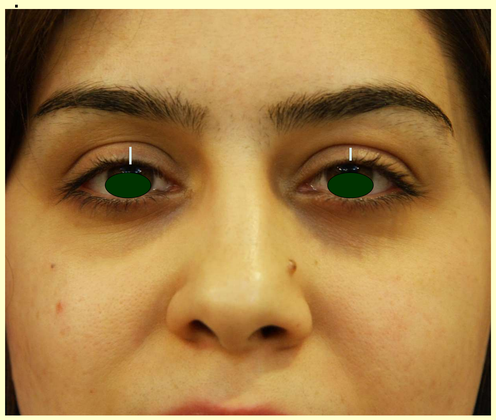
- Silent Sinus Syndrome developed after rhinoplasty, with pure maxillary involvement

- Silent Sinus Syndrome developed after rhinoplasty, with ethmoidal and maxillary involvements

METHODS AND MATERIALS

- We present four patients developed chronic silent sinus syndrome following nasal surgery.
- There has been only one prior report of silent sinus syndrome presenting after nasal surgery.

- Despite of this prior report, silent sinus syndrome in our four patients is a first report of delayed silent sinus syndrome following nasal surgery that all were developed more than one year after procedure.



- Silent Sinus Syndrome developed after rhinoplasty, with pure maxillary involvement and different eyelid creases.

Discussion

- Lateral displacement of the end part of middle turbinate results in obstruction of the ostiomeatal and accumulation of secretions in closed sinus cavity.
- All of the patients had nasal dressing after surgery.

CONCLUSIONS

- Silent sinus syndrome is a diagnosis which should be considered in any patient present with a droopy eyelid and a deep superior sulcus
- It is a unilateral, progressive, spontaneous enophthalmos and hypoglobus secondary to maxillary sinus hypoventilation caused by blockage of the ostiomeatal complex.
- Functional Endoscopic Sinus Surgery (FESS) could prevent progression of disease.