Silent Sinus Syndrome

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CASE STUDY

Patient: A 45-year-old otherwise healthy airline pilot, with a history of maxillary sinusitis followed by nasal stuffiness and pressure equalization problems in right maxillary sinus in 7-10/2010.

During this time period the patient experiences some minor visual accommodation problems. They disappeared with active treatment antral saline lavages and antibiotics.

The patient stays symptomless for almost 1.5 years, with no problems related to pressure changes.

The patient experiences right maxillary pain during flight without respiratory infection again in 2/2012. Visual accommodation problem returns, with numbness in cheek and right upper teeth. Pain increases in landing. Again treatment with antibiotics. Antral lavage gives thick mucous secretion, with positive culture for E.Coli and good response to doxycyclin antibiotic treatment. The patient returns to flying after control lavage in one week. No more pain or further pressure induced problems at this point.

After two weeks the patient notices double vision when looking up right or down left. This worsens during pressure changes, especially when landing. He is grounded from flying. Pressure is felt in right eye when blowing nose. When pressing the right eye, patient feels pain in right upper teeth. The wife of the patient notices that right eye seems to be lower than left, with slight enoftalmus.

In a 3D CBCT scan with SCANORA® 3Dx (SOREDEX, Finland) right maxillary sinus is homogenously opacified and the ostiomeatal area is lateralized. The uncinate process is located tightly against the lamina papyracea and the roof of maxillary sinus/orbital floor is lower than normal. No visible bone between orbita and maxillary sinus and at the posterolateral wall of maxillary sinus can be seen. Minor mucosal swelling in left maxillary and ethmoidal sinus walls and maxillary sinus ostium area are seen. Other sinuses appear to be normal. (Fig. 1, 2, 3 and 4).
The patient is successfully operated endoscopically (FESS). During operation the right maxillary sinus is found to be full of thick tenacious mucus and the bone of the orbital floor and medial as well as posterolateral wall is thinned and partly absent.

The patient returns to flying two weeks post-operatively after complete resolution of symptoms. Also the cosmetic difference between orbitae disappears.

Silent sinus syndrome is a complex problem with changed operative anatomy. SCANORA® 3Dx CBCT system is a perfect tool when accurate 3D spatial visualization is needed when planning endoscopic sinus surgery in complex cases.