Silent Sinus Syndrome
Beatrice Neves, MD (presenter); Carla Andre, MD; Maria Helena Rosa, MD; Luis Antunes, MD

OBJECTIVE: 1) Recognize this rare entity with the constellation of progressive enophthalmos and hypoglobus, demonstrated by CT imaging of paranasal sinuses. 2) Understand the pathophysiology of this entity, based on chronic maxillary sinus obstruction with hypoventilation due to obstruction of the ostiomeatal unit.

METHOD: In this study we present a classic case of Silent Sinus Syndrome and a review of the etiology, pathophysiology, radiologic findings and surgical treatment.

RESULTS: Our patient showed the typical findings on para-nasal sinuses CT with complete unilateral obstruction of the maxillary sinus and ostiomeatal unit with collapse of the orbital floor.

CONCLUSION: A clear set of criteria is needed for the diagnosis, these including enophthalmos and hypoglobus in the absence of clinically evident sinusitis, emphasizing the importance of CT imaging in the diagnosis. The treatment consists in restoring sinus ventilation and correction of the orbital floor defects.

Smoking and the Nasal Airway
Sverre Steinsvaag, MD, PhD (presenter); Milada Cvancarova, MSc

OBJECTIVE: 1) Study the relationship between cigarette consumption and endonasal geometry. 2) Study the relationship between cigarette consumption and nasal airflow. 3) Study the relationship between cigarette consumption and nasal congestion.

METHOD: Design: Cross sectional. Conducted: 2001-2007. Condition: nasal obstruction/congestion. Subjects: referred patients with chronic nasal or sleep related complaints. Setting: secondary referral hospital. Intervention: acoustic rhinometry and peak nasal inspiratory flow. Outcome measures: minimal cross-sectional area, nasal cavity volume, nasal congestion index, peak nasal inspiratory flow. Independent variables: daily cigarette consumption (pack years) Preliminary analyses of ongoing study. Statistical methods: Linear and logistic regressions.

RESULTS: Pack years was inversely associated with selected measures for minimal cross-sectional area, nasal cavity volume and reversible nasal congestion (p<0.001-0.05).

CONCLUSION: We have demonstrated an inverse association between important rhinometric measures and cigarette consumption (pack years), indicating that smokers exhibit narrower nasal cavities, perform lower inspiratory flow, and have a less compliant mucosa than non-smokers.

Stentless Endoscopic Dacryocystorhinostomy
Rosalind Simon (presenter); Gurdeep Singh

OBJECTIVE: Dacryocystorhinostomy (DCR) is a procedure performed to drain the lacrimal in cases of nasolacrimal duct obstruction or in chronic dacryocystitis. It can be performed externally or endoscopically. The aim of this study is to describe endoscopic dacryocystorhinostomy with full sac exposure and primary mucosal anastomosis without stenting the lacrimal ostium and to report perioperative and follow-up results achieved with this procedure since April 2005.

METHOD: Forty-seven consecutive patients (38 Females and 9 Males; mean age 46.7y; range 14-74y) who presented to the DCR clinic with epiphora secondary to nasolacrimal duct obstruction and recurrent infection were included in this study. All these patients underwent primary powered endoscopic DCR. A total of 53 procedures were performed using a standardized surgical technique. Post-operatively, symptom evaluation and endoscopic assessment of the newly created lacrimal ostium were done.

RESULTS: Forty-six of the 53 primary DCRs were patent after a mean follow-up of 24 months, yielding a success rate of 87%. The other seven procedures were revision cases. Patency was assessed by symptomatic evaluation and endoscopic visualization at each post-operative visit.

CONCLUSION: Powered endoscopic DCR with mucosal flaps without stenting has a success rate comparable to that achieved with stents and external DCR.

Stereoscopic 3D Endoscopic Images of the Paranasal Sinuses
Joao-Flavio Nogueira, MD (presenter); Daniel Cruz, MD

OBJECTIVE: Demonstrate the acquisition and processing of stereoscopic three-dimensional endoscopic images of the anatomy of the nose, paranasal sinuses and skull base.

METHOD: An anatomical study performed at the anatomical laboratory of our institution in January 2010. We used an anatomical specimen (human head) in which we performed an endoscopic dissection of the nose, paranasal sinuses and skull base following a prepared manual. The dissection was performed with usual instruments and endoscopes that are used to perform traditional endoscopic endonasal surgeries. Images were captured during the dissection and converted with the aid of computer programs suitable for conversion into three-dimensional stereoscopic images.

RESULTS: Even with the use of bidimensional traditional endoscopes we were able to get good quality stereoscopic images with a clear perception of the depth of the structures of the nose, paranasal sinuses and skull base.

CONCLUSION: With traditional endoscopes and simple computer programs we were able to obtain stereoscopic 3D images with good quality. These three-dimensional stereo-
Successful Management of Chronic Nasal Polyps with Xolair
Sophie Scherl (presenter)

OBJECTIVE: We studied the effect of omalizumab on nasal polyps, steroid dependency and patient serum IgE levels. Evidence supports a role of IgE in the development of polyps via a local response initiated by Staphylococcus aureus-derived enterotoxins. Increased IgE has been documented in nasal polyps and the nasal mucosa of polyp patients. Allergic polyps are associated with elevated serum IgE levels. Nasal secretions in polyp patients have shown increased levels of IgE even with no documented history of allergies.

METHOD: We included patients with documented IgE allergies, asthma, and chronic nasal polyposis that recurred following two surgical procedures and were dependent on corticosteroids for control of nasal symptoms and asthma. Three patients with longstanding nasal polyposis and poorly controlled asthma were retrospectively studied over a period of two years. Prior to omalizumab treatment, each patient required daily low dose oral corticosteroids to control their asthma and nasal symptoms. These steroid dependent patients had persistent polyps, elevated serum IgE levels and all had received prior immunotherapy. All received monthly or bimonthly omalizumab injections for greater than 8 months.

RESULTS: In less than 12 months all polyps disappeared and all corticosteroid use had been discontinued. Free Serum IgE levels were also reduced by greater than 50% in each patient.

CONCLUSION: Based on the response we observed in our patients, it appears that omalizumab can temporarily eliminate nasal polyps, lower circulating free IgE and eliminate steroid dependency in patients with chronic allergic polyposis. Further study of the impact of omalizumab on nasal polyps and QOL is warranted.

Swing Door Technique of Uncinectomy
S P S Yadav, MS (presenter); Kuljeet Singh, MS; Anita Hooda, MDS

OBJECTIVE: To compare the results and complications of uncinectomy and middle meatus antrostomy by standard and swing door technique during functional endoscopic sinus surgery.

METHOD: A prospective controlled study was undertaken, January 2007-December 2008, including 60 cases of either sex in the age group of 18-50 years suffering from chronic maxillary sinusitis. Computed tomography scan of the paranasal sinuses was done and were treated with functional endoscopic sinus surgery (FESS). The patients were randomly divided in two groups of 30 each. Group A underwent uncinectomy using standard technique during FESS. Group B underwent uncinctomy using swing door technique during FESS. Study done at tertiary care centre. All patients were given an adequate course of antibiotics. Patients not responding to medical treatment underwent CT scan of the paranasal sinuses and functional endoscopic sinus surgery. The pre-operative severity of patient symptoms and post-operative improvement were analyzed on visual analogue scale. Data were analyzed by using Student t-test and Chi-square test.

RESULTS: Improvement in the symptoms was compared in both the groups after 6 weeks and it found to be statistically of very high significance (p<0.001). In group A, the mean VAS score was 78.50mm16.63 and in group B, it was 80.58mm14.34 [‘], showing better improvement of symptoms in group B. In group A, complete eradication of symptoms, i.e. VAS 100, was achieved by 18 out of 30 patients with nasal obstruction. One of 30 patients with postnasal drip, 2 of 27 with rhinorrhoea, and one of 24 with nasal discharge. Whereas in group B, 100% score was achieved by 24 of 30 patients with nasal obstruction, 2 of 30 with postnasal drip, 1 of 30 with nasal discharge. There were no major complications in either group. At the 2nd week, 8 (26.65%) minor complications in group A and 2 (2.66%) in group B were observed. At the 6th week, it was 1 (3.33%) and 0 (0%) in the groups, respectively. When compared statistically at 2nd week by using χ² test, the difference was found to be statistically significant (p<0.05, χ²=4.81), showing less incidence of complications in group B.

CONCLUSION: Postoperative symptomatic improvement in the symptoms at 6 weeks was found to be very high significant (p<0.001). In group B, middle meatus antrostomy was patent in all patients and no remnants of uncinate process were seen in any case. In the present study it was observed that swing door technique gives good postoperative results with fewer complications as compared to the standard technique.

Systematic Review of Sinonasal Hemangiopericytoma
Melanie Duval, MD (presenter); Euna Hwang, MD, CM; Shaun Kilty, MD

OBJECTIVE: Hemangiopericytoma is a form of sarcoma that is uncommonly encountered in the nasal cavity or paranasal sinuses. By performing a systematic review of reported cases of hemangiopericytomas of the sinonasal cavity we aimed to: 1) Determine the recurrence rate for the different treatment modalities (open vs endoscopic surgery, radiotherapy, others). 2) Determine the presentation and prognosis of this condition.

METHOD: A systematic review was performed. A search for the terms ‘hemangiopericytoma’ and nasal cavity or paranasal sinuses was performed on Medline and EMBase between 1955 and 2009. 116 articles were identified. The abstracts were screened to select relevant articles. 100 articles were reviewed by 2 independent reviewers to extract the relevant information about each reported case of sinonasal hemangiopericytoma.