

Pediatric Maxillary Sinusitis Case Study

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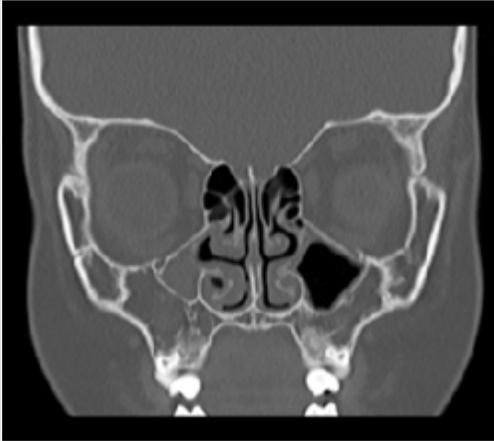


FIGURE 1

Background

This patient is a 6 year-old female who was referred to Dr. Ramadan. For the previous 4-5 years the patient had suffered from chronic sinus problems. Symptoms included constant nasal congestion, coughing, and snoring. The patient had also been diagnosed with asthma for which she used Sinuglair®, Advair®, and albuterol. Allergy testing results were negative; however, the patient was exposed to second-hand smoke from family members. Prior to the initial visit the patient had recently completed a 30-day course of Omnicef®. An initial exam with Dr. Ramadan showed edematous red nasal mucosa and colored nasal discharge. A three week course of Augmentin® was prescribed. After the course was completed, a follow-up exam was conducted. The exam showed continued colored nasal discharge, and symptoms of constant coughing and congestion had not improved significantly. A CT scan confirmed bilateral maxillary blockage and bilateral thickening of the mucus membrane. The CT scan also showed a hypoplastic right maxillary sinus and a lateralized right uncinate (Figure 1). Based on the nature and duration of the disease, it was decided that the patient should undergo endoscopic sinus surgery using Sinus Balloon Catheters concurrent with adenoidectomy. The mother of the patient consented to this approach and surgery was scheduled.

Treatment

Under general anesthesia, bilateral middle turbinate reduction using a shaver, bilateral maxillary anastomy using balloon dilation technique, and adenoidectomy were performed. Nasal endoscopy revealed very large middle turbinates. A shaver was utilized to decrease the size of the left middle turbinate thereby creating more space with which to access the left maxillary sinus. Using a *Relieva* Sinus Guide Catheter (M-110S), a 0.035" compatible *Relieva* Sinus Guidewire was placed through the left maxillary ostium into the maxillary sinus (Figure 2). Proper positioning of the Sinus Guidewire was confirmed through fluoroscopy, and a 5x16mm *Relieva* Sinus Balloon Catheter was passed over the Sinus Guidewire and into the maxillary sinus. The Sinus Balloon Catheter was inflated to 10 atmospheres, deflated, and then removed. Lavage and aspiration were completed. Turbinate reduction and balloon dilation were performed on the right middle turbinate and right maxillary sinus respectively.



FIGURE 2

Pediatric Maxillary Sinusitis Case Study

continued



Relieva Sinus Balloon Catheters

Following treatment of the sinuses, an adenoidectomy was performed. Prior to removal, the adenoid pad was noted to be very swollen and blocking much of the back of the nose. The patient was extubated and taken to the recovery room in satisfactory condition. She was prescribed a 10 day course of amoxicillin following the surgery.

Discussion

Follow-up was completed at 4, 16, and 29 weeks. At the 4-week follow-up visit, the mother noted that the patient was doing better. Nasal drainage had improved, and coughing had improved slightly. Saline sprays and Nasonex® were recommended for continued control of symptoms. Additionally, it was recommended that the patient continue her asthma medications including Singulair®, Advair®, and albuterol.

At 16 weeks, the patient's mother reported that the patient had not had a sinus infection since the surgery, and she believed the nasal obstruction was almost completely resolved. Additionally, the patient no longer snored, and the constant cough had improved significantly. Continued use of Nasonex® and asthma medications was recommended.

At 29 weeks, the mother reported that the patient still hadn't had a sinus infection since the surgery, and she was doing better in school. Drainage was no longer a problem, the cough was almost completely resolved, and inhalers were no longer needed. The mother commented that it seemed as though the asthma had resolved. Continued use of Nasonex® was recommended.

To summarize, the patient had suffered from chronic maxillary rhinosinusitis for most of her life, compounded by asthma. After years of failed medical therapy, bilateral maxillary sinus surgery using the *Relieva Balloon Sinuplasty*™ system in conjunction with adenoidectomy was determined to be the best course of action for the young patient. Since the surgery, and up to 29 weeks follow-up, the patient has not had a sinus infection, and has had notable improvement in her asthma.

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