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Becky Skidmore

The orange cover page is in honor and in memory of the precious lives lost in Stillwater during homecoming; OOA supports Oklahomans coming together to support one another. #Stillwaterstrong

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Welcome to this edition of OOA TODAY magazine. On behalf of all of us at Oklahoma Otolaryngology Associates, we hope that our magazine provides useful information for you. We realize that you have a choice as to who you refer your patients and we want you to know how much we appreciate your trust. Please remember that our primary goal is to provide our patients with the best possible ear, nose and throat care in Oklahoma.

We are happy to welcome our newest physician to our practice, Brandon Pierson, MD. In August, he opened a new clinic in southwest Oklahoma City and is serving that community and surrounding areas. He and his wife, Dr. Namali Pierson, live in Norman with their two children.

Sincerely,

Steven V. Richards, M.D.

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For the Babies

Under normal circumstances, the middle ear (space behind the eardrum) is filled with air. Air is necessary for the hearing mechanism inside our ears to work properly. The Eustachian tube, which connects the middle ear to the back of the nose and throat, helps maintain the balance of air pressure on both sides of the tympanic membrane. An ear-popping sensation may signal equalization of the air pressure in the middle ear and is perfectly normal. However, allergies, the common cold or other ear, nose, and throat infections might cause closure of the Eustachian tube, blocking the normal exchange of air. As a result, a vacuum may develop in the middle ear space causing the development of negative pressure behind the eardrum. A painful earache or plugged ear sensation may develop. Eventually the vacuum will pull fluid from the lining of the middle ear causing hearing loss. Children are more susceptible to middle ear infections because a child's Eustachian tube is straighter and shorter than an adult's, thus providing easier access for infection to reach the middle ear space.

After several ear infections, it may be agreed upon that an Otolaryngologist should be consulted to consider the insertion of Tympanostomy tubes to alleviate the chronic otitis media. This operation is very short, usually about 15 minutes. There is minimal pain after the operation which consists of making a tiny incision (MYRINGOTOMY) in the eardrum, the fluid is removed and a small TYMPANOSTOMY TUBE is inserted into the incision. This tube is roughly the size of the tip of a pen. The tube prevents the incision from closing prematurely and allows for the free exchange of air between the ear canal and the middle ear space. According to Jonathan Pillow, MD, "In children with chronic ear infections or persistent ear fluid, ear tubes can make a dramatic difference in their quality of life. The tubes can improve hearing when fluid is present and prevent the painful episodes of otitis media. The tubes also allow the use of topical antibiotic drops to treat infections that may develop with the tubes in place."

In effect, the tube replaces the function of the Eustachian tube until it can resume its normal function. Once in place, the tube cannot be seen or felt and it is rarely dislodged. It usually remains in place for an average of 12 months. The tube works its way out naturally and the eardrum heals rapidly. Some patients may still develop ear infections, even with the tubes in place which will manifest with drainage from the ear canal. For 99% of patients, tubes are not needed after the tubes fall out and the eardrum heals.

In children with chronic ear infections or persistent ear fluid, ear tubes can make a dramatic difference in their quality of life. The tubes can improve hearing when fluid is present and prevent the painful episodes of otitis media. The tubes also allow the use of topical antibiotic drops to treat infections that may develop with the tubes in place.

— Jonathan Pillow, MD

After Tympanostomy tube extrusion, only approximately 20% of patients have enough continued Eustachian tube trouble to consider tube replacement.

Removal of the adenoids is sometimes performed in combination with this procedure if the adenoids are swollen and blocking the opening to the Eustachian tube. Tonsils may also be removed if they are associated with the recurrent infections.

Tympanostomy tubes may be placed under general or local anesthesia, depending on the age and cooperation of the patient and the parents' preference. Our staff is especially trained to work with the pediatric patients to keep them comfortable through this process. There are many excellent books available that may help prepare a child for the operating room. One recommendation is Curious George Goes to the Hospital, by Margaret Rey.

After the operation, minor bleeding may develop from the incision in the eardrum. There also may be small specks of blood in the ear canal after the operation. However, active bleeding after 24 hours is extremely rare. The child will usually have ear drops to use for a short time after the procedure. As with any surgery, there is a small risk of infection due to manipulation of the native tissues. If an infection develops after surgery, it can often be treated with antibiotic drops alone. Pain, if any, is minimal and controlled with Motrin or Tylenol. In ~1% to 3% of cases, a persistent tiny hole will remain in the eardrum after the tube falls out. This may require additional surgical procedures to repair or may need no treatment at all. After the surgery, strict water precautions with ear plugs are usually not necessary but may be suggested at the discretion of an Otolaryngologist. A hearing test or audiogram through Oklahoma Hearing Center may be done to assist the Otolaryngologist in the assessment of the patient's hearing and Tympanostomy tube function.

Ear plugs should be worn when swimming in dirty water like a lake or river. Diving into water and swimming deep is not recommended with ear tubes. If discolored or bloody drainage develops from the ear at any point, the physician should be consulted and antibiotic drops are usually sufficient to clear the infection. If the drainage persists for more than three days, then the physician should be contacted.

In summary, when Myringotomy and Tympanostomy tube placement does become a necessary treatment for middle ear disease, the procedure is quick, the risks are very few and the benefits to the patient and family are considerable. At any time our physicians or staff would be pleased to discuss with you questions you might have about myringotomy and tube placement.

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Nosebleeds

Nose bleeds occur in one of every seven people and affects all age groups. In most cases, it is simply secondary to the cold dry air, nasal trauma or blood thinners. However, in some cases it can relate to more serious diseases, such as cancers of the nasal cavity, sinuses or nasopharynx. Some causes involve trauma, nasal fractures and other facial injuries, nasal foreign bodies or simply cold, dry air going across a deviated nasal septum. This dry, turbulent air causes breakdown of mucosa, leaving a friable bleeding surface. Topical nasal steroids can irritate the nasal septum. Patients in the hospital with nasal cannulas placed for supplemental oxygen frequently have nosebleeds (especially those on heparin for cardiac reasons). Traumatic placement of nasogastric tubes, or simply prolonged use of NG tubes can cause nose bleeds as well.

Infectious causes of epistaxis include acute or chronic rhinosinusitis resulting in inflammation and bleeding. A simple upper respiratory infection can result in epistaxis. Coagulopathy is a major etiology of epistaxis. Not only are the nose bleeds sometimes profuse, but they also are very difficult to control as long as the patient remains coagulopathic. Some common etiologies of coagulopathy in epistaxis patients include the use of heparin, Coumadin, aspirin or NSAIDS. Systemic etiologies include liver disease, splenomegaly, thrombocytopenia and leukemia.

Neoplastic diseases also cause epistaxis. Benign nasal disease (such as nasal polyposis) sometimes presents with epistaxis. Also, an inverting papilloma can present with epistaxis. Cancers of the nasal cavity or nasopharynx

(such as Squamous cell carcinoma, adenocarcinoma, esthesioneuroblastoma, mucosal melanoma or adenoid cystic carcinoma) are in the differential. In a teenage boy, a juvenile nasopharyngeal adenocarcinoma can present with nosebleeds. Other presenting complaints (such as nasal congestion or sinus-like symptoms) are also features of neoplastic diseases of the sinonasal cavity. Rare disease such as Osler-Weber-Rendu, or hereditary hemorrhagic telangiectasia, should also be considered.

Nasal endoscopy has played a major role in not only localizing the site of bleeding, but also directly treating the nose with minimal discomfort and trauma, aiding **the physicians at Oklahoma Otolaryngology Associates** to treat this condition. However, if the site of bleeding is not seen, a thorough endoscopic exam of the nasal cavity is warranted.

In the acute treatment of epistaxis, topical decongestants (i.e. Afrin, Neosynephrine) have vasoconstrictive properties which may help. If this is not successful, cautery can control the bleed.

If the above measures still do not control the bleed, the source may be posterior and a posterior pack may need to be placed. Antibiotic therapy is used so that a sinusitis or even worse, toxic shock syndrome, does not occur. If a posterior pack is placed, the patient is typically monitored in the hospital.

If packing does not work or the patient continues to bleed despite long-term use of packing, there are other options to explore. One is embolization of the sphenopalatine/ internal maxillary artery. A newer alternative to transantral internal maxillary artery ligation is an endoscopic ligation of the sphenopalatine artery. These options are generally very effective.

In conclusion, **the physicians at Oklahoma Otolaryngology Associates** suggest using alternatives to nasal cannulas, such as a face mask with humidified oxygen in patients on anticoagulation therapy and avoid traumatic placement of NG tubes. In patients who are prone to nose bleeds in the winter, they should use saline nasal sprays daily and nasal lubricants or gels, as recommended.

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Sino-Nasal Outcome Test (SNOT-20)

The following questionnaire is intended to help define your symptoms and provide valuable information and insights for your doctor. Answer the questions, rating to the best of your ability the problems you have experienced over the past two weeks.

Patient Name: _____

Date: _____

1. Consider how severe the problem is when you experience it and how frequently it happens. Please rate each item below on how "bad" it is by circling the number that corresponds with how you feel. 2. Please mark the most important items affecting your health (maximum of five items).	No Problem	Very Mild Problem	Mild or Slight Problem	Moderate Problem	Severe Problem	Problem As Bad As It Can Be		Five Most Important Items
1. Need to blow nose	0	1	2	3	4	5		○
2. Sneezing	0	1	2	3	4	5		○
3. Runny nose	0	1	2	3	4	5		○
4. Cough	0	1	2	3	4	5		○
5. Post-nasal discharge	0	1	2	3	4	5		○
6. Thick nasal discharge	0	1	2	3	4	5		○
7. Ear fullness	0	1	2	3	4	5		○
8. Dizziness	0	1	2	3	4	5		○
9. Ear pain	0	1	2	3	4	5		○
10. Facial pain/pressure	0	1	2	3	4	5		○
11. Difficulty falling asleep	0	1	2	3	4	5		○
12. Wake up at night	0	1	2	3	4	5		○
13. Lack of sleep	0	1	2	3	4	5		○
14. Wake up tired	0	1	2	3	4	5		○
15. Fatigue	0	1	2	3	4	5		○
16. Reduced productivity	0	1	2	3	4	5		○
17. Reduced concentration	0	1	2	3	4	5		○
18. Frustrated/restless/irritable	0	1	2	3	4	5		○
19. Sad	0	1	2	3	4	5		○
20. Embarrassed	0	1	2	3	4	5		○

Score	Evaluation	Recommended Next Step
0 to 29	No problem to mild problem	No action necessary or symptoms can be treated with medications
30 to 69	Mild to moderate problem	Symptoms can most likely be treated with minimally invasive office procedure
70 to 100	Moderate to severe problem	Treatment to be determined by doctor, possible surgical candidate

*The SNOT score evaluation is to be used as a guide and not a physicians' diagnosis. Treatment to be determined by a doctor upon appointment.

Obstructive Sleep Apnea

More than 40 million people are affected by sleep-disordered breathing (SDB) in the United States with many remaining undiagnosed and untreated. The prevalence of Sleep Apnea has been reported 2% in women and 4% in men, 10% among elderly men and 33% among morbidly obese individuals. In recent years, the high degree of morbidity and mortality associated with untreated Obstructive Sleep Apnea (OSA) has become evident. The typical OSA patient will have complaints of loud snoring, daytime sleepiness, difficulty concentrating during the day, waking up from snoring in the middle of the night and restless sleep. There also may be a history of headaches, memory loss, sexual dysfunction and depression. Treating physicians should inquire about recent weight gain, chronic use of alcohol, sleeping pills and other sedating drugs which can cause or exacerbate OSA. A striking number of excessive nocturnal deaths have been recorded in patients with severe, untreated OSA.

The pathophysiology behind OSA is the failure in the maintenance of patency of the upper airway during sleep respiration. The physicians at Oklahoma Otolaryngology Associates inspect the upper airway which extends from the nostrils to the subglottis and search for anything that may lead to blockage of this pathway. Our primary goals in the physical examination of a suspected OSA patient are to define the overall anatomical predisposition for airway obstruction and to recognize focal lesions that may be amenable to correction. Specifically, our physicians will look at the nasal cavity and nasopharynx for obstructions due to nasal septal deviations, hypertrophied turbinates, nasal polyps or perhaps enlarged adenoids. The oral cavity and oropharynx should be evaluated for macroglossia, tonsillar hypertrophy and a redundant palate. The craniofacial structure will be investigated for retrognathia (or a "weak chin"), which is often associated with a posterior displacement of the tongue and OSA.

If the diagnosis of OSA is suspected based on history and physical condition, then a polysomnography (sleep study) is prescribed. The Respiratory Distress Index (RDI) will reflect the total number of apneas and hypopneas per hour of sleep and is used to characterize the results to the sleep study. If the RDI is greater than 10, it is considered abnormal; a severe case of OSA has a RDI greater than 50. Oxygen saturation levels below 85% during sleep are highly

significant and regular desaturations below 60% represent severe obstructive sleep apnea.

One of the most effective treatments for OSA is continuous positive airway pressure (CPAP). This device worn on the face every night maintains a "pneumatic splint" in the airway preventing collapse and obstruction. The pressure of the room air pumped through the mask is often humidified, usually ranging from 5 to 20 cm H2O. Although the efficacy rate approaches 100% with CPAP, the compliance rate of CPAP is probably closer to 70%, which is unfortunate.

There are surgical treatments for OSA that the physicians at Oklahoma Otolaryngology Associates can discuss with your patients which address the nose, oropharynx, nasopharynx, and hypopharynx which can be tailored specifically to each patient, since the level of obstruction and anatomy are different from one individual to the next. Some of these procedures include septoplasties, turbinate reductions, nasal polypectomies, adenoidectomies, tonsillectomies and palate reduction.

According to Dr. Mark Gilchrist, obstructive sleep apnea and sleep disorder are often complicated problems involving multiple areas of the airway. Treating this disease process requires comprehensive evaluation of the head and neck and looking at the patient as a whole. Treatment can be challenging, but is rewarding for the patient who can achieve better sleep and better quality of life. OSA affects a significant proportion of the population and is often under diagnosed. Being vigilant to screen for this condition means successful treatment which can reverse other health risks for the patient.

...obstructive sleep apnea and sleep disorder are often complicated problems involving multiple areas of the airway. Treating this disease process requires comprehensive evaluation of the head and neck and looking at the patient as a whole. Treatment can be challenging, but is rewarding for the patient who can achieve better sleep and better quality of life.

— Mark Gilchrist, MD

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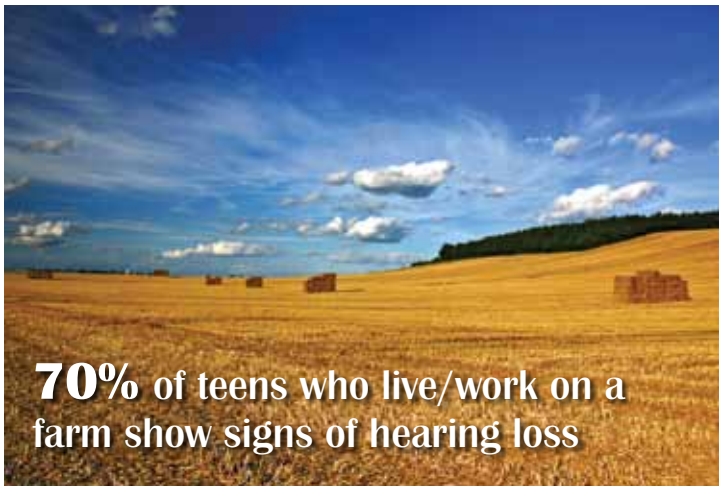

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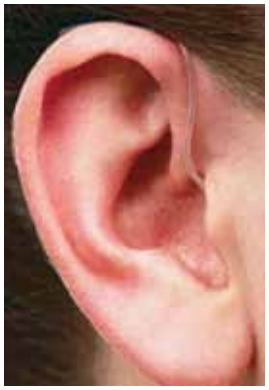

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