

HEADLines

MUSC Health Ear, Nose, & Throat News

 **MUSC Health**
Medical University of South Carolina
Changing What's Possible



Paul R. Lambert, M.D.
Professor and Chair

SPRING 2015

INSIDE

Chairman's Message

Cleft Lip & Palate Surgery

Swimmer's Ear

New FDA Approved
Allergy Treatments

Investigating Sinusitis
Treatments

HEADLines is the ENT health care newsletter published by the MUSC Department of Otolaryngology - Head & Neck Surgery for Charleston Tri-county and surrounding residents.

www.muscENT.org

Paul R. Lambert, M.D.
DEPARTMENT CHAIR, EDITOR-IN-CHIEF

Alison Padlan-Gillette
CREATIVE & PRODUCTION MGR.

©2015

Pediatric Expertise



The Medical University of South Carolina CHILDREN'S HOSPITAL has announced its new hospital will open in 2019. This will be a major milestone for our community, the state of South Carolina, and the region. Children's hospitals bring many "firsts" to the people they serve, providing unparalleled care to families facing complex as well as routine conditions.

PEDIATRIC ENT is excited to be a part of the new Children's Hospital, and elevate medicine for children around our State and beyond. From the more ordinary procedures – such as ear tubes and tonsillectomies – to the more complex – such as ear surgery for cholesteatomas, airway difficulties, cochlear implants, sinus disease, cleft lip and palate, and tumors of the head and neck region – a team of MUSC Health specialists is there for your child. Our team includes

ENT physicians with additional training in pediatrics, pediatric anesthesiologists, and pediatric nurses.

The Department of Otolaryngology (ENT) at MUSC Health is pleased to provide SAME DAY SERVICE at multiple locations – downtown, Mount Pleasant, and North Charleston – and coming soon to the new Children's Hospital. For more information or to make an appointment, log onto muscENT.org or call 843-792-3531. It is our pledge to Change What's Possible for children and their families.

Paul R. Lambert, M.D.

Paul R. Lambert, M.D., Professor and Chair
Otolaryngology – Head & Neck Surgery
Medical University of South Carolina

Strong Children Facing Big Challenges: Cleft Lip and Palate Surgery

Krishna G. Patel, M.D., Ph.D. *Specialist in Facial Plastic and Reconstructive Surgery*

If you ask why I love working with children who are born with a cleft lip and palate, I could write a book. These children are resilient and no matter how excellent the repair, they face challenges at a very early age to improve their speech and to cope with the social stigma of facial scars. Today, the incidence of children born with clefts of the lip and/or palate is one in 700. Treatment is individualized to each child through our **MUSC Health Craniofacial Anomalies and Cleft Lip & Palate Team**. Our team is a nationally accredited craniofacial team and is made up of multiple specialists to accommodate the needs of the children. The goals of treatment are to restore function of the palate for eating and speech, and to restore a natural appearing lip and nose.

Timeline

Monitoring children born with clefts starts at birth and sometimes interventions are needed soon after. Prenatal ultrasonography has improved detection of babies with clefts, which enables the parents to have time to feel more prepared when caring for their child. At our institution, we encourage parents to meet with our speech pathologist for prenatal counseling on what to expect and how to feed their baby. Children with cleft palates cannot create suction, which causes significant issues with breastfeeding and bottle-feeding. Fortunately, there are solutions in feeding techniques and special bottles that enable parents to feed their child with ease.

Children born with very wide clefts sometimes are asked to wear special mouth retainers leading up to their cleft surgeries. This retainer can aid in the closure of the cleft. Typically, children undergo repair of their cleft lip around three months of age and repair of their palate around nine months of age. This is not the end of treatment for these children, but yet the beginning. As the children begin to develop speech, they often undergo intense speech therapy through



personal sessions or within school programs. Developing clear speech is one of the most important challenges these children must overcome. About 20% of the time therapy is not enough and children with cleft palates require an additional surgery in the back of their throat to aid in creating clear speech. We often attempt to treat children prior to their matriculation into first grade, in order to improve their ability to communicate in a social environment.

As children grow and their permanent teeth develop, braces and retainers are often needed. If the cleft extended to the gum line, an additional surgery is required to add bone to the gum line. If teeth alignment cannot be fully treated with orthodontics and the teeth do not sit together properly, the child may require larger jaw surgery as a teenager. Lastly, most children with cleft lips have an asymmetry to their nose as well. We attempt to correct this conservatively in the first surgery at three months of age, but usually an additional surgery is performed as a fully-grown teenager. Thus, depending on the children's needs, they may undergo several surgeries before reaching adulthood. Those of us dedicated toward treating children with clefts constantly strive to decrease the frequency of surgeries but facial growth must be balanced with the timing of surgeries and is part of the reason for the various staged surgeries.

It is with great determination and patience that these children go through their treatment protocol. As surgeons, we have the privilege to treat these children as they develop into adults, which is both humbling and rewarding.



Dr. Patel's patient born with a cleft lip and palate before surgery, and 3 years later.

Our Department

Within our department, pediatric otolaryngologists Dr. Chris Discolo and Dr. David White, and facial plastic/reconstructive surgeon Dr. Krishna Patel are intimately involved in the surgical treatments. Some of these surgeries include cleft lip repair, cleft palate repair, speech surgery, ear tube placement, jaw distraction and rhinoplasty surgery. Dr. Betsy Davis, oromaxillofacial prosthodontist plays an important role in the presurgical mouth retainers designed to improve the cleft width and dental care needed. To learn more about the MUSC Health Craniofacial Anomalies and Cleft Lip & Palate Team, please contact our craniofacial coordinator, Sherry Cannon at 843-792-3251.



Krishna G. Patel, M.D., Ph.D.

Swimmer's Ear

Christopher M. Discolo, M.D., MSCR

Specialist in Pediatric ENT



*Christopher M. Discolo, M.D., MSCR,
Medical Director, Craniofacial Anomalies and Cleft Lip & Palate Team*

With warmer weather approaching, many will turn to water-based activities in an effort to deal with the summer heat. For some, this means dealing with a potentially painful condition known as swimmer's ear. The technical term is acute otitis externa and refers to a painful swelling of the skin of the ear canal. Swimmer's ear results in over 2 million doctor's visits per year, about half of those being in children 5 – 14 years old. This article will provide a summary of acute otitis externa and review treatments and preventative tips based on the most recently released guidelines.

Causes of Swimmer's Ear

As mentioned above, swimmer's ear is an infection involving the skin of the ear canal. Research has shown that this condition is more common in warmer, more humid environments and where water exposure is most prevalent. Typically summer months are when most cases are reported.

As the infection develops, usually over the course of only 1-2 days, the skin starts to swell and cause pain. Sometimes the swelling can be seen extending out onto the more visible parts of the outer ear. The ear is often very tender to the touch. One or both ears may be affected. Often there is a history of some type of water exposure a few days before the symptoms start.

In the United States, bacteria cause nearly all cases of swimmer's ear. Although there does appear to be an increased risk if you swim in dirtier water, treated water (i.e., swimming pools) may still contain the bacteria that cause this condition.

Because the skin is a natural barrier to infection, chronic skin problems or damage to the skin of the ear canal may increase the risk of developing this infection. Damage to the skin of the ear canal most commonly occurs through attempts at

cleaning the ear of wax (cerumen). Care should be taken when cleaning the ear of a child as sudden movements may cause injury. Sharp objects, such as bobby pins, should never be used. Cerumen plays an important role in keeping the ear canal healthy, so attempts at removing all the wax should generally be avoided. Often, attempts at cleaning actually push the cerumen farther down in the ear, causing an impaction or blockage. When too much cerumen is present, the natural clearing mechanism of the ear cannot function normally. If this happens, water may get trapped behind the cerumen and not be able to drain out of the ear normally. Your physician can tell you if there is too much cerumen in the ear. If needed, removal of cerumen is generally very straightforward and can be performed in both children and adults in the office.

Treatment

As pain is a primary component of swimmer's ear, pain medication may be needed. Mild to moderate pain usually responds well to over the counter medications such as acetaminophen or ibuprofen. Severe pain may require the use of a narcotic pain medication. Ear drops that contain numbing medication may be prescribed but are of questionable benefit.

Since swimmer's ear is a bacterial infection, antibiotic treatment is recommended and should be in the form of ear drops. Antibiotics taken by mouth are almost never

needed in uncomplicated infections. Many physicians will use a drop that contains an antibiotic as well as a steroid medication, which helps to reduce swelling and relieve symptoms. Remember to tell your physician if you or your child have a hole in the ear drum (tympanic membrane perforation) or an ear tube in place as some of the antibiotics used to treat swimmer's ear are not recommended for these particular patients.

Sometimes, the swelling of the ear canal is so severe that the ear canal essentially swells shut. When this happens, debris may collect in the ear canal and medication may not be effective in getting down to the infection to treat it. The ear occasionally needs to be cleaned out prior to starting treatment. A small sponge (wick) is sometimes placed into the ear canal to allow medication to reach the needed areas. This may require several trips back to the doctor's office over the course of several days. During treatment your physician will likely recommend avoiding any water exposure until the infection is resolved.

Prevention

Fortunately there are some things that each of us can do to help minimize the chance of developing swimmer's ear. Obviously, the most effective treatment is to avoid water exposure. Unfortunately, for most of us, this is not the most practical (or fun) thing to do.

Maintaining a healthy ear canal is another way to reduce your risk of infection. This

Continued on back page.

Recent FDA Approval Offers New Allergy Treatment Options

Mark J. Hoy, M.D.

Director, General Otolaryngology & Allergy

Allergic rhinitis is one of the most common chronic diseases afflicting the human population affecting 500 million individuals worldwide and 30-60 million in the US. Estimates are that 1 in 5 individuals will develop allergic disease such as allergic rhinitis (hayfever), allergic conjunctivitis or allergic asthma in their lifetime. Healthcare expenditures for the diagnosis and treatment of allergic disease is in the billions of dollars annually in the U.S. alone.

Traditional management of allergic disease, particularly allergic rhinitis and hayfever includes 3 tiers: 1. avoidance/environmental control, 2. pharmacotherapy (medications) and 3. immunotherapy. Fortunately most individuals are well controlled with a combination of environmental controls and medications. However, there is a subset of patients whose symptoms are poorly controlled and for whom immunotherapy is an option. Immunotherapy is best thought of as an incremental administration of small amounts of a substance one is allergic to in an effort to build up tolerance. Immunotherapy is the only method of allergy treatment that actually modifies the course of the disease. Other methods of treatment either simply limit exposure or attempt to relieve symptoms. Traditionally, immunotherapy has been administered by shots, given weekly or bi-weekly and administered in a physician's office with a 30 minute period of observation afterward. Shots are generally administered for a period of 3-5 years. More recently, alternative methods of immunotherapy

administration have been developed. One such method is the sublingual (under the tongue) administration of treatment serum. **Sublingual immunotherapy** is further subdivided into tablet and drop forms.

The Food and Drug Administration has recently approved two new sublingual tablets for the treatment of certain grass and ragweed allergies. Both Oralair (Stallergans, Inc) and



Mark J. Hoy, M.D., General Otolaryngology and Allergy

Ragwitek (Merck & Co.) are now available by prescription. Oralair is indicated for the treatment of grass allergy and contains a mixture of 5 common grasses. Ragwitek is indicated for the treatment of ragweed allergy and contains short ragweed pollen extract. Both drugs are to be initiated approximately 4 months before the start of their respective allergy season (typically August to November for ragweed and June to August for grasses). Treatment continues through the end of each pollen season. The first is administered in a health care provider's office, but subsequent doses are taken at home. The dose for both drugs is one tablet placed under the tongue once daily.

The safety and efficacy of both drugs have been studied extensively in the US and Europe. Well controlled studies with placebo groups have shown the drugs to be both safe and effective. Patients on both drugs reported significantly less allergy symptoms as well as a decreased need for other allergy medications during their allergy season. Side effects are typically minor and most commonly included itching of the mouth, tongue and ear, swelling of the mouth and throat irritation. Like any other form of immunotherapy, the possibility exists for severe systemic reactions such as anaphylaxis. It is thought that this risk is extremely low and less than that of allergy injections. Patients are encouraged to know the signs of anaphylaxis and to have access to an Epi-pen for rapid administration if anaphylaxis is suspected.

Sublingual immunotherapy (either drops or tablets) offers allergy sufferers yet another treatment option available to manage their disease. Ask one of our Ear Nose and Throat doctors if you might be a candidate for this exciting new form of treatment.



Sinusitis Affects More Than Just the Nose

Rodney J. Schlosser, M.D. *Director, MUSC Health Sinus Center*



We all know that sinusitis leads to symptoms of nasal drainage, sinus congestion, nasal obstruction and decreased sense of smell. In addition to these nasal symptoms, the Sinus Center at MUSC Health has been investigating the effects of sinusitis outside the nose. We are part of an international collaborative group that is comprehensively studying how chronic rhinosinusitis (CRS) affects our patients and how we can better predict success with medical or surgical treatment. Our research has shown that 72% of patients with sinusitis have disrupted sleep and decreased energy levels (Alt JA, et al, Int Forum Allergy Rhinol 2014). Sinus patients also have impaired cognition or ability to concentrate that certainly affects work and school performance. This was evident both on questionnaires and a simple computer test measuring reaction time. In such patients, this results in an average productivity cost of over \$10,000 per year with an annual average of nearly 25 days of missed work and 38 days of presenteeism (decreased

productivity while at work) (Rudmik L, et al, Laryngoscope 2014). We found that surgical treatment of sinusitis improves sleep symptoms, as well as nasal symptoms.

The challenge facing physicians caring for sinusitis patients is determining the best medical or surgical treatment. Oftentimes patients undergo months of medical therapy with antibiotics, oral or nasal steroids, and other medications without benefit. Similarly among patients who undergo sinus surgery, approximately 80-85% experience clinical improvement, however we currently have no way of identifying those patients most likely to benefit, thus methods to streamline and predict treatment response are needed. Historically, patients have been evaluated by nasal endoscopy to determine the size of polyps, presence of pus, or swelling or by CT scan to measure the severity of mucosal thickening. Unfortunately, these traditional measures have not been very useful in predicting outcomes with medical or surgical therapies. We have developed novel methods of classifying patients based

upon non-traditional measures, including severity of symptoms and age, that appear to better predict which patients will benefit from surgery and which ones will benefit more from medical treatment. We are continuing our work to improve this classification scheme by examining local measures of sinus inflammation. In the future this will enable us to personalize treatments when patients present to us and avoid prolonged medical or surgical treatments that are unlikely to improve their symptoms.

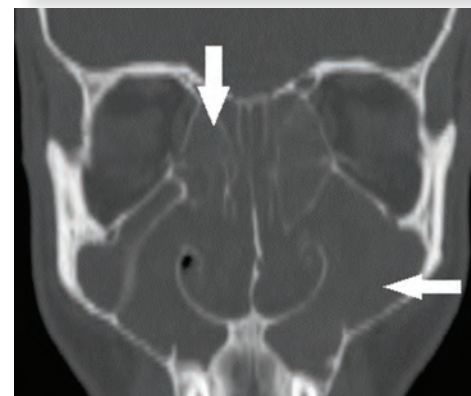
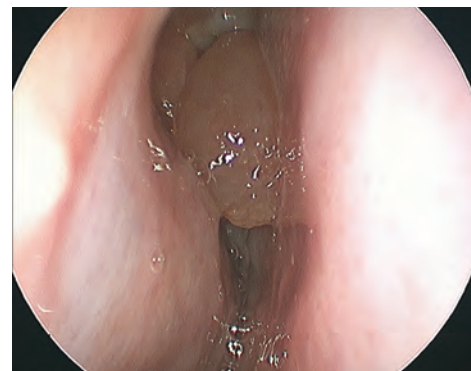


Figure: Nasal endoscopy in the top image demonstrates a very large grape-like polyp. Sinus CT on the bottom image demonstrates complete blockage of the sinuses (gray areas depicted with arrows). Unfortunately such traditional measures do not predict optimal treatment approaches, however, MUSC researchers have developed novel classification schemes which may improve our ability to individualize treatments for patients.

Swimmer's Ear ...continued from page 3.

involves safe and responsible cleaning of the ear canal. If you or your child has a chronic skin condition, like eczema, having the ears examined to make sure the ear canal skin is not affected is a good idea. Excessive amounts of cerumen, if present, should be removed by a medical provider to help prevent water from getting trapped deep in the ear canal.

Earplugs can be worn during times of water exposure to help limit the amount of water that gets into the ear. These can be purchased over the counter in most pharmacies. Custom ear molds can also be made and are commonly used by individuals, like competitive swimmers, who spend a lot of time in the water.

Frequently, people who are prone to getting swimmer's ear will be placed on ear

drops to use before and after any water exposure. This may be paired with the use of a hair dryer to help remove water from the ear canal. This must be done with care as the ear can be burned. The hair dryer should be on the cooler setting and held a good distance from the ear to allow the air currents to enter the ear canal to help dry without causing injury.

In summary, swimmer's ear is a common and painful infection of the ear canal that usually occurs following exposure to water. It is most common during the summer months and in children and usually occurs after water exposure. If you develop the rapid onset of ear pain along with a full or muffled feeling you should consult your doctor. Treatment is very successful and usually involves the use of antibiotic ear drops.



Changing What's Possible

Recent satisfaction surveys reveal that our ENT doctors consistently provide the professional quality health care that patients come to expect.

Our ENT physicians have been fellowship trained through some of the very best programs in the country and limit their individual practices to:

- Facial Plastic Surgery
- Oncology (Tumors of the head and neck)
- Otology (Ear disorders)
- Pediatric ENT
- Rhinology (Sinus and allergy disorders)
- Laryngology (Voice and swallowing)

Otolaryngology Head & Neck Surgery

Downtown Charleston Office

135 Rutledge Avenue, MSC 550
2nd floor - Rutledge Tower
Charleston, SC 29425-0550

Hollings Cancer Center

86 Jonathan Lucas Street
3rd Floor, Cooper Pavillion
Charleston, SC 29425

MUSC Health East Cooper

1600 Midtown Avenue
Mount Pleasant, SC 29464

MUSC Health North Charleston

8992 University Place - 2nd floor
North Charleston, SC 29406

— Appointment Scheduling —

Otolaryngology..... 843-792-3531
Downtown Charleston, East Cooper,
North Charleston

Audiology 843-792-3531

Evelyn Trammell Institute for
Voice & Swallowing 843-792-3531

Hollings Cancer Center
Head & Neck Clinic..... 843-792-8363



ENT STAT!

MUSC Health Ear, Nose and Throat physicians are dedicated to providing patients exceptional, timely care – and also offer **SAME DAY SERVICE** when needed.



Call 843-792-3531
Downtown | Mt Pleasant | North Charleston
Website: muscent.org

