Nasal obstruction affects a significant percentage of our population and can be attributed to a variety of fixed structural conditions including nasal septal deviation, turbinate hypertrophy, nasal polyposis among other conditions. What is less well understood is the role of dynamic nasal valve insufficiency in the spectrum of nasal obstruction. Studies estimate that approximately 13% of the general population suffers from nasal valve collapse resulting in nasal obstruction. This dynamic collapse may be due to inherent lack of nasal sidewall support that often worsens with age, previous nasal surgery, trauma with separation of the upper lateral cartilage from the nasal bones among others. Nasal valve collapse has been the subject of recent investigation as patients who have undergone surgical intervention to assist with fixed obstructive issues not infrequently present with postoperative obstruction secondary to unaddressed nasal valve incompetence.

Assessment of nasal valve insufficiency is sometimes difficult in the setting of other obstructive phenomenon. When examining a patient with a severe septal deviation, for example, it is often challenging to appreciate the extent of the valve collapse because the limited airflow through the restricted nostril may not be sufficient to trigger the extent of the nasal valve collapse that would be seen if there were greater airflow. Also, it is sometimes difficult to perform a modified Cottle maneuver in these patients because simply inserting
The incidence of both melanoma and non-melanoma skin cancers (basal cell carcinoma and squamous cell carcinomas) has been increasing over the last several decades. A recent analysis of Medicare Claims data showed that procedures performed for non-melanoma skin cancers (NMSC) nearly doubled from 1994 to 2006\(^1\). The number of procedures continued to increase by 13% from 2006 to 2012. The total number of people estimated to be treated for NMSC in the United States in 2012 was more than 3.3 million\(^2\). The primary goal in treating skin cancers is preventing recurrence via surgical excision with clear margins. Surgical treatment of these skin cancers involves either wide local excision or MOHS resection.

Closure of MOHS defects or larger skin resection defects involves several reconstructive options. Very small defects, particularly on concave surfaces, may be allowed to granulate in by secondary intention. Defects larger than 5mm are usually closed either with primary closure, skin grafts, or local flap reconstruction. As long as the defect area can be closed without adversely affecting or distorting surrounding structures, primary closure via adjacent tissue undermining is a suitable option.

For larger defects involving the face, or with complex locations such as the nose and lips, local flaps or skin grafts are necessary for reconstruction. Local flap reconstruction involves rotating or advancing tissue surrounding the defect to close the wound. Commonly utilized single stage flaps include the bilobe flap, V-Y flap, rhomboid flap or cervicofacial advancement flap. For nasal defects, two stage flaps, such as the melolabial flap or paramedian forehead flap are often performed to allow for a better thickness and subunit match. These flaps are based off of a pedicle and require delayed division after neovascularization from the recipient bed has taken place. Auricular cartilage is also often utilized in nasal reconstruction to maintain optimal nasal function and appearance.

Skin graft reconstruction can be a good option in patients that have shallow defects, thin skin at the defect site, or want to avoid two-staged surgery. Skin grafts involve harvesting tissue from a regional or distant site with primary closure of the donor site. Regardless of which technique is employed for reconstruction of defects after skin cancer resection, the goals are consistent – 1) to obtain an optimal functional and aesthetic outcome and 2) to promote adequate and timely healing in cases where adjuvant postoperative treatment, such as radiation, is necessary.


**SUNSCREEN – THE TRUTH BEHIND THE SPF NUMBER**

**KIM CHANG**
Aesthetician

According to the Centers for Disease Control and Prevention several risk factors play a role for different types of skin cancer. Some risk factors include: lighter skin color, family history of skin cancer, and exposure to the sun through work and play.

There are two types of sun ultraviolet (UV) radiation, UVA and UVB. UVB is what causes burning, and UVA is more associated with aging – wrinkles, leathering, and sagging. All of which can exacerbate cancer risk. Broad spectrum sunscreen helps prevent both UVA and UVB radiation from reaching the skin.

Other than choosing a broad spectrum sunscreen, it is important to understand Sun Protection Factor (SPF). SPF is not the strength as many may believe, but helps determine the length of time of how long the skin is protected from radiation. The SPF number lets you know how much longer your skin will be protected. Say it takes 20 minutes for your skin to turn red in the sun, an SPF 15 prevents reddening 15 times longer, which is about 5 hours. In terms of percentage filter, an SPF 15 filters out about 93% of all incoming UVB rays, while an SPF 30 filters out 97%. Regardless of number, sunscreens do not block all UV rays completely.

Although it’s great to understand the SPF value, regardless of how high the number is, no sunscreen is expected to stay active for longer than 2 hours without reapplying. A great rule of thumb while out on the beach or swimming is about every hour, and during work or leisurely play – every 2 hours.

Other preventative measures to take throughout the year is to remember to seek shade between 10AM-4PM where UV radiation is strongest. Checking the UV index in your area is also helpful. The index scale indicates at what hour the UV rays are strongest within the day. Wear big brimmed hats during peak hours and examine your skin every month. Look for any suspicious spots that may have grown and use the ABCDE rule: Asymmetry, uneven Borders, changes in Color, larger Diameter than a pencil eraser, and moles that are evolving. Also, schedule to see a Baylor dermatologist every year for a thorough head-to-toe skin exam.

**REFERENCES:**
Reconstruction of the face, head, or neck after removal of skin cancer or traumatic injuries requires surgeons that have expertise in all rungs of the “reconstructive ladder” in order to provide the best possible outcome (Figure 1). The ideal reconstruction of skin defects, especially those in cosmetically important areas like the face, head, and neck, means minimizing or hiding scars while also providing new skin of similar color, thickness, and texture. For this reason, primary closure or local flap repair are often the most cosmetically appealing techniques as they involve borrowing neighboring skin of similar quality to replenish what was lost. Although secondary intention healing and the use of skin or biologic grafts can be excellent methods in specific cases, these can often lead to prolonged wound healing times and widened or distorted scars. In some cases, skin defects are too large or complex for any of these repair techniques. If indicated, these wounds may be amenable to microvascular free tissue transfer reconstruction. In microvascular free tissue transfer reconstruction, tissues (for example bone, muscle, nerve, skin) removed in cancer surgery are systematically reconstructed and replaced by similar tissues taken from a distant site of the body by means of transplantation. These composite tissue transplantsations require harvesting of the reconstructive tissues with their associated blood supply. The blood vessels, on average only one to three millimeters in diameter, are then sutured with the aid of a microscope to an artery and vein near the defect so that the transplanted tissue can survive in its new environment (Figure 2). Similarly, nerves can also be reconstructed with these microsurgical techniques providing means for patients to regain either sensory or motor function lost in their cancer removal surgery.

Donor

Figure 1. The “Reconstructive Ladder”.

Figure 2. Microvascular surgery. A. Size of microvascular suture needle compared to a penny. B. Microvascular surgical connections (anastomosis) between arteries (arrow) and veins (asterisk).
tissues for these types of defects are most commonly retrieved from the thigh, forearm, lower abdomen, or back. While this procedure is an extensive surgery, in select cases it may provide the best option in providing full thickness skin and soft tissue to optimize the cosmetic result, while also minimizing wound healing time and preventing delay in further therapies (Figures 3-5). This is especially important in cases where adjuvant therapies such as radiation or chemotherapy may be required to treat skin cancer. Other situations where microvascular free tissue transfer reconstruction is beneficial include: wounds where bone, nerve, or blood vessels are exposed and must be protected; large surface areas of lost skin (usually greater than 30 cm²); and history of prior surgeries or radiation to the wound that might prevent wound healing by other means. The facial plastic surgeons in the Department of Otolaryngology – Head and Neck Surgery all have extensive experience and fellowship training in facial reconstruction. Specifically, microvascular free tissue transfer is only performed by surgeons with further training in reconstructive microsurgery, and we are happy to provide this option to our patients to suit all their reconstructive needs.

References:


EDUCATION UPDATE

ILENE CHIU, MD
Faculty Associate
UT Southwestern Department of
Otolaryngology - Head & Neck Surgery
Dallas/Ft. Worth, TX

DANIEL FOX, MD
Private Practice
Texas Ear Nose and Throat Specialists
Katy, TX

RAMYA SRINIVISAN PATEL, MD
Private Practice
ENT Associates of Houston – Medical Center
Houston, TX

ANDREW J. VICTORES, MD
Fellowship – Rhinology and Skull Base Surgery
John Hopkins Hospital
John Hopkins University School of Medicine
Baltimore, MA

Pictured (L to R): Ilene Chiu, Andrew Victores, Daniel Fox, and Ramya Patel

Resident Research Day & Visiting Professor, Marion Couch, MD, PhD, MBA, FACS, Professor and Chair,
Department of Otolaryngology – Head & Neck Surgery, Indiana University
29TH ANNUAL J. CHARLES DICKSON AWARD

Dr. J. Charles Dickson was widely respected for his pioneering work in otolaryngology and was considered an authority in his field. This is the 28th year that residents in our program have been honored with the awards.

OUTSTANDING CLINICAL RESEARCH
Nathan Lindquist, MD
The Implications of Antibiotic Susceptibility for the Surgical Treatment of Neck Abscesses at a Tertiary Pediatric Care Center

OUTSTANDING CLINICAL RESEARCH
Prasanth Pattisapu, MD
A Systematic Review of Temporal Bone Trauma Causing Facial Nerve Injury: a Suggestion for Minimum Reporting Guidelines

Presented by Herbert L. DuPont, MD, MACP, President and CEO Kelsey Research Foundation on behalf of the Kelsey-Seybold Clinic and the Kelsey Research Foundation.
DR. SMITH AWARD TO ADMINISTRATIVE CHIEF

Daniel Fox, MD
2016-2017 Administrative Chief

Presented by Herbert L. DuPont, MD, MACP (pictured right) in honor of Dr. James Smith

FIRST ANNUAL EARLIE THORN AWARD – FOR JUNIOR RESIDENT DEMONSTRATING SELFLESSNESS IN SERVICE

Omar G. Ahmed, MD

Presented by Caleb Simmons, MD, Class 2016 (pictured left) with the help of Ms. Earlie Thorn (pictured right)
Rachel Regone, MD is this year’s recipient of the Annual Resident Teaching Award presented by the Texas ENT Specialists. Rance Raney, MD, class 1997, presented the award, which his group has done for the past 20 years.
RESEARCH

RECENTLY AWARDED RESEARCH FUNDING

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<tr>
<th>PI</th>
<th>PROJECT TITLE</th>
<th>FUNDING SOURCE</th>
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<tr>
<td>Andrew Sikora, MD, PhD</td>
<td>Targeting the Immune Microenvironment to Make Tumors Susceptible to Immune Attack</td>
<td>Owens Foundation Translational Research Award</td>
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<tr>
<td>PI: Stephen Y. Lai, MD, PhD, FACS - MD Anderson</td>
<td>Using Dynamic Contrast-Enhanced Magnetic Resonance Imaging (DCE-MRI) to Establish Objective Clinical Outcome Measures for Mandibular Osteoradionecrosis</td>
<td>National Cancer Institute</td>
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<td>Co-Investigator: Vlad C. Sandulache, MD, PhD</td>
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PUBLICATIONS


Ahmed OG, Guillerman RP, Giannoni CM. Protocol utilizing Low-Dose Non-Contrast CT Airway can Decrease Bronchoscopy Rates for Suspected Foreign Bodies in Pediatric Patients. Podium Presentation at American Society of Pediatric Otolaryngology Annual Meeting; May 2017; Austin, Texas.


Altman KW. Chronic cough and the protective laryngeal mechanism. Keynote lecture at IFOS – The ENT World Congress; June 2017; Paris, France.

Bassett E, Aboul-Fotouh D, Hicks MJ, Rosenberg TL, Chelius DC. Pigmented epithelioid melanocytoma: a case report and review of the literature. Poster at SETNAC; December 2017; Orlando, Florida.


Cohen HS, Stitz J, Mulavara AP, Peters BT, Miller C, Sangi-Haghpeykar H, Williams SP, Bloomberg JJ. Updated norms for epidemiologic screening tests of the vestibular system. Poster at Association for Research in Otolaryngology Mid-Winter Meeting; February 2016; San Diego, California.


Farrell B, Bengstom J. Data Management Plan to Curate Electrophysiological Data From The Mammalian Cochlea. Presented at 40th Annual Meeting of Association of Research in Otolaryngology; February 2017; Baltimore, Maryland.


Hanoteau AC. Overcoming T cell radio-sensitivity and exploiting radiation-induced lymphopenia to enhance cancer therapy? Poster presentation at Annual Dan L Duncan Comprehensive Cancer Center; March 2017; Houston, Texas.

Mohyuddin N, Yim M, Bennet B. Horse Bite Crush Injury to the Larynx: A Case Report. Poster Presentation at Combined Otolaryngology Spring Meetings; April 2017; San Diego, California.


Takashima M. Invited lecturer and moderator at International Surgical Sleep Society; May 2017; University of Southern California, LA, California.


DR. BERT W. O’MALLEY JR. PRESENTED AS THE BOBBY R. ALFORD DISTINGUISHED LECTURE ENDOWED BY THE HELIS FOUNDATION.

L to R: Dr. Donald T. Donovan, Dr. Bobby R. Alford, and Dr. Bert W. O’Malley Jr.
AWARDS AND HONORS

Daniel C. Chelius, Jr., MD
Councilor, BCM Alpha Omega Alpha
AAO-HNS Ethics Chair Search Committee

Carla M. Giannoni, MD
President-elect for the Texas Children’s Hospital – January 2018

Tara L. Rosenberg, MD
Selected as Surgical Director of the Texas Children’s Hospital Vascular Anomalies Center

Andrew G. Sikora, MD, PhD
Invited to join the Research Committee of the American Head and Neck Society
This spring, Dr. Deidre Larrier at Texas Children’s Hospital conducted three-simulation training exercises at Texas Children’s sister hospitals in Katy and The Woodlands. TCH Katy had experienced a turnover in operating room staff and expressed an interest in having them retrained in the management of aerodigestive foreign bodies. We met that need with a three-hour training session where the first half introduced the topic and the instruments we used (picture 1), while the second half immersed
them in two scenarios where they had to retrieve aerodigestive foreign bodies (picture 2).

Prior to the opening of the operating room at our new TCH in The Woodlands, we completed similar training session in aerodigestive foreign bodies (picture 3) for operative and peri-operative staff, as well as in the evaluation and management of post tonsillectomy bleeds for the surgical advanced practice providers who will be working with the Otolaryngology service there. Special thanks to Dr. Mary Musso (West Campus) and Dr. Sonal Soraia (TheWoodlands) for co-teaching in these exercises.