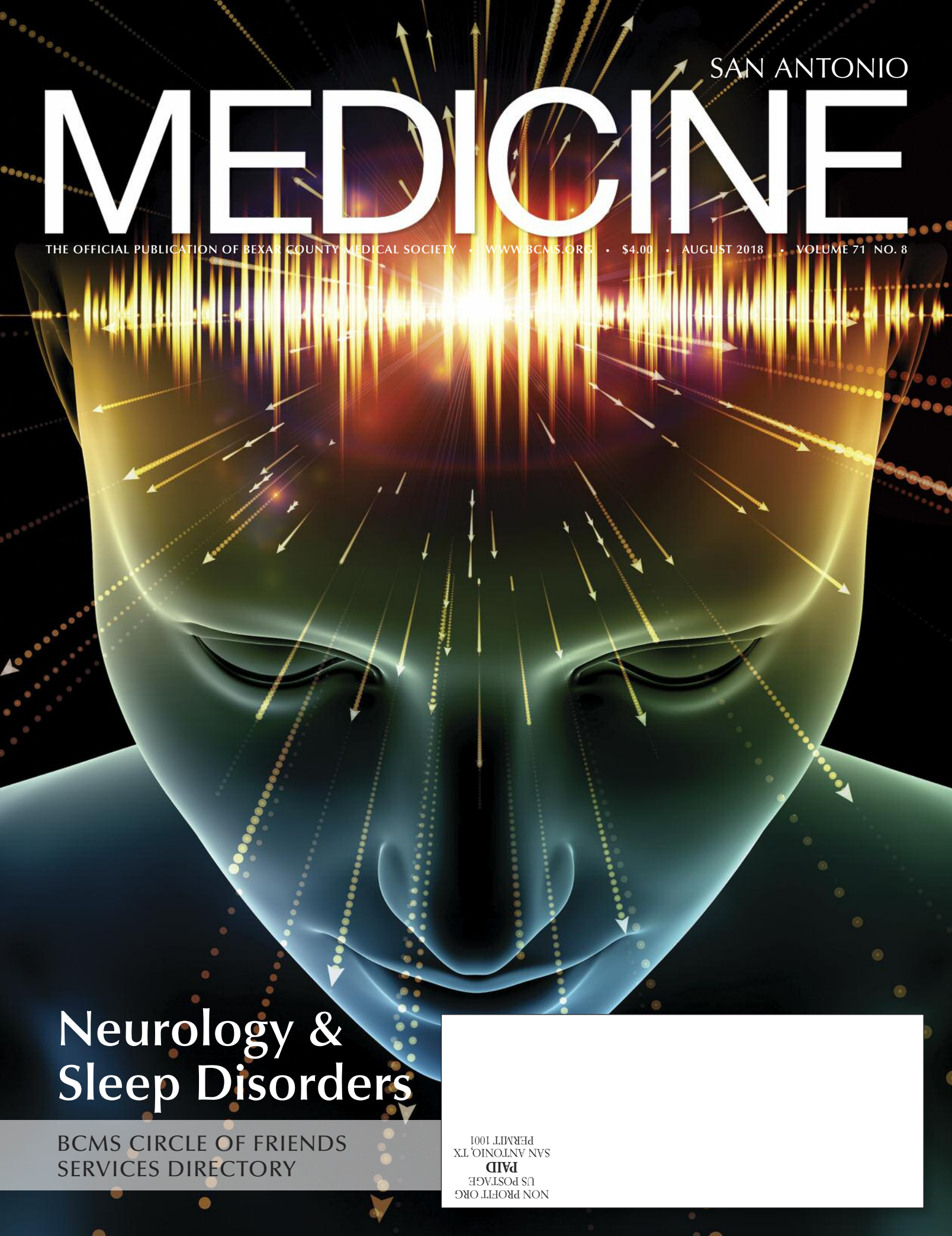

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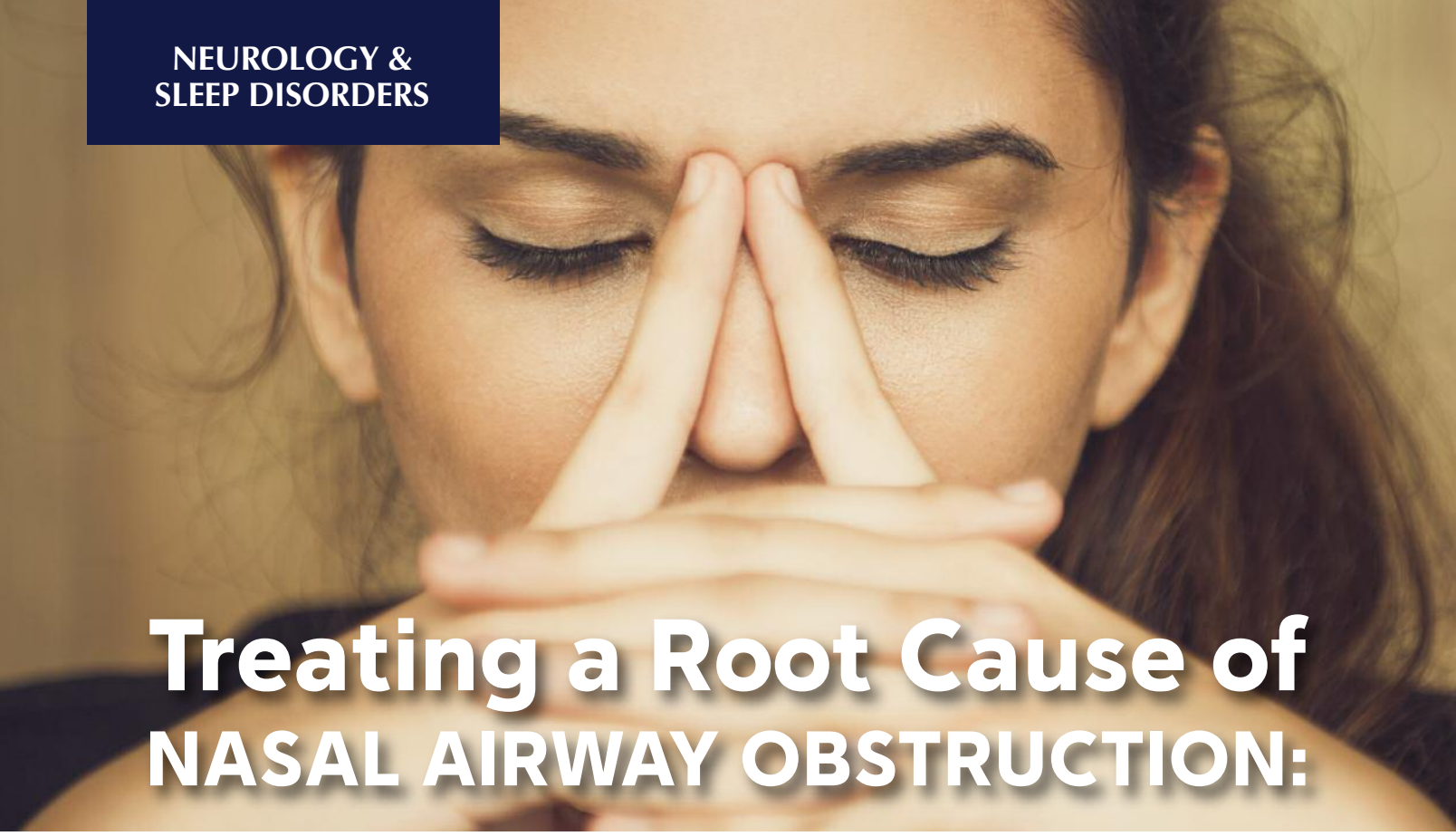


Treating a Root Cause of NASAL AIRWAY OBSTRUCTION:

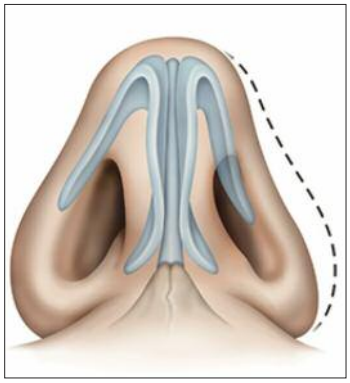
The evolution of treatment modalities for nasal valve collapse

By Jose Barrera, MD

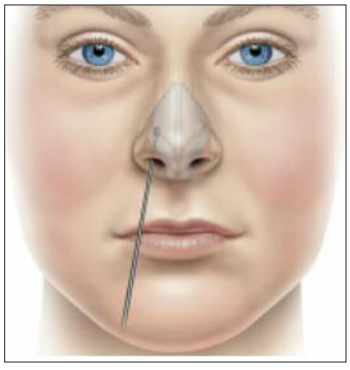
It is estimated that more than 20 million Americans suffer from nasal airway obstruction (NAO)[1], which limits airflow through the nose with significant quality of life consequences.[2] As nasal breathing delivers 70% of the airflow that the lungs receive,[3] NAO may significantly reduce the amount of air delivered to the lungs. Symptoms of NAO include nasal congestion, labored nasal breathing, challenges getting enough air through the nose while exercising, and trouble sleeping.[4]

How Nasal Valve Collapse (NVC) Can Contribute to NAO

NAO can result from even the slightest narrowing of the nasal passage;[5,6,7] common conditions that contribute to NAO include septal deviation, turbinate hypertrophy and nasal valve collapse (NVC).[8] NVC, which may equal or even exceed septal deviation as the prime cause of NAO, occurs as a result of weak nasal cartilage collapsing inward when a person inhales,[8,9] It may be due to previous rhinoplasty, nasal trauma or congenital weakness of the nasal cartilage. NVC can be readily diagnosed with the Modified Cottle Maneuver, which is performed using a cerumen loop or curette to gently support the lateral wall cartilage on each side of the nose while the patient breathes. If the patient experiences significant improvement in breathing on inspiration, the Modified Cottle Maneuver is indicative of NVC.



COLLAPSED VALVE



MODIFIED COTTLE MANEUVER

In my experience treating individuals with NAO, I have found that many patients often make the mistake of ignoring symptoms because they may become accustomed to their nasal breathing issues, or compensate with mouth breathing. It is also common for patients to misdiagnose their symptoms for chronic allergies or sinusitis, and decide to soldier on with reduced nasal breathing.

Treatment of NAO due to NVC has often included vasoconstrictive and/or anti-inflammatory nasal sprays that do not correct NVC, and nasal strips or dilators that are ill-suited for daytime use and may irritate the skin and mucosa. Traditional NVC procedures (grafts) are less than ideal, as

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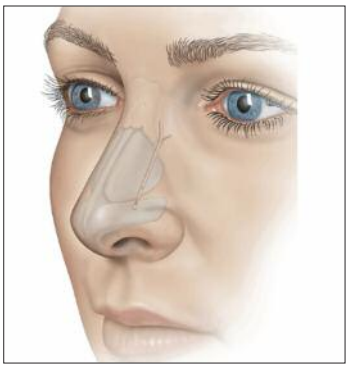
they are highly invasive and often lead to less predictable functional and cosmetic outcomes – leading many ENTs to forgo treating NVC. None of these solutions meet the risk-benefit expectations of either physicians or patients.

An innovative treatment for NVC may provide durable relief from NAO symptoms

A recent innovation has enabled physicians to use a new approach for addressing NAO due to NVC - the LATERA® absorbable nasal implant. This new option has yielded success for both patients and physicians as these implants address the anatomical issue of a collapsed nasal wall by providing additional support to nasal wall cartilage and stabilizing its structural integrity. The implant is inserted through a small incision and works to support the upper and lower lateral cartilage by anchoring above the maxilla to provide cantilever support. Correction of the underlying structural defect in the nasal wall reduces NAO symptoms and helps patients breathe better. Importantly, patients have experienced a minimal risk of any adverse cosmetic changes.



ABSORBABLY NASAL IMPLANT

The implant is designed to be absorbed over a period of approximately 18 months. After implantation, tissue encapsulation promotes acute implant stability and enables localized tissue response during the absorption process. Remodeling occurs once the implant is replaced with fibrous collagen construct to provide ongoing support.

Positive data were recently presented at the 2017 Annual Meeting of the American Academy of Facial Plastic and Reconstruction Surgery (AAFPRS). The study was conducted in 30 adult patients with NVC. Patients had severe or extreme symptoms as established by the validated Nasal Obstruction Symptom Evaluation (NOSE) instrument. A total of 56 implants were placed in these 30 patients, 26 of whom received implants on both sides of the nose. Patients were assessed at 1 week and 1, 3, 6, 12, 18 and 24 months post-procedure.

Key findings of the study include:

- Continuing, significant NOSE score reduction at all time points, averaging 63.4%, 56.2%, 52%, 52.5% and 57.7% at 3, 6, 12, 18 and 24 months, respectively ($p<0.001$)
- No adverse change in cosmetic appearance at 24 months post procedure
- Short learning curve for physicians adopting the technology

While we need to remember that NAO treatment options will always depend on the cause, it is important to consider anatomical issues, including NVC as a possibility. NVC independently affects the quality of life for NAO patients, and patients fare significantly worse when left untreated. The availability of a safe, intuitive solution to treat NVC patients without altering appearance now enables physicians to administer a durable solution to their condition – and that should help all of us breathe a bit easier.

Dr. Jose Barrera, MD practices at the Texas Center for Facial Plastic and Laser Surgery & Endormir Sleep and Sinus Institute in San Antonio where he specializes in sleep and nasal surgery.

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