Sinus Headache ... what is it really?

Sinus headache is a common complaint in general medical practice and, due to its refractory nature despite a plethora of medical therapies, it is an equally common complaint in otolaryngology practices. The symptoms are well known and popularized by the lay media: recurring and throbbing head and/or facial pain, nasal congestion and rhinorrhea. Patients are generally forthright in their treatment expectations and well versed in what has failed to provide relief in the past. Frequent antibiotics are a perceived necessity but almost universally ineffective alone so they are usually combined with decongestant and/or anti-inflammatory medications. The symptoms can be prolonged and relief is frequently temporary and for varying durations. Symptoms can be more prevalent during the spring and fall, leading to theories about allergic etiologies and on goes the many attempts to treat with equally disappointing and frustrating outcomes.

The cyclical nature of this condition consumes an enormous amount of healthcare resources. These “sinusitis” patients become frequent flyers in our offices and expect repeated and prolonged treatment with antibiotics despite the lack of objective evidence of a bacterial infection or a past history that this treatment was effective. Properly managing these patients requires an understanding of the pathophysiology of sinus headache, confidence in the diagnosis, knowledge of appropriate therapies and the fortitude to resist the pressures and intimidation of persistent and demanding patients.

Since the common misperception that sinus headache is caused by sinusitis, healthcare information resources are filled with articles and testimonials from experts on the best treatment for sinusitis. These resources further reinforce the etiologic misconceptions by first empathizing with patients who are suffering with chronic and recurring “sinus pain.” For this, I apologize and hope to set the record straight for those who want to believe the data and not the populous. For starters, rather than a Google search on “sinusitis,” one only needs to search “sinus headache” and the magnitude of the condition will begin to reveal itself.

What is sinus headache and why is it such a difficult problem to treat? The answer usually lies in the diagnosis. Over 90% of patients presenting to physicians with sinus headache have migraine. The data is clear that the vast majority of patients who present for treatment of sinusitis, with sinus headache and their primary symptom, are actually suffering from a form of migraine. These are sometimes referred to as “atypical migraine” since the classic features of migraine may be absent. In contrast to classic migraine, the distribution of sinus migraine pain is generally V1 and/or V2 and can be unilateral or bilateral. Complicating the situation are patients who also have a history of more classic migraine because their typical headache symptoms are so consistent and obvious to them that they insist that their sinus headaches are different and definitely not migraine.

Further complicating this conundrum is the absence of any objective diagnostic study for migraine. CT scanning, considered a gold-standard imaging modality for paranasal sinus inflammatory conditions, is fraught with inaccuracies. These images are frequently and grossly over-interpreted by well-meaning radiologists who perpetuate the notion that mucoperiosteal thickening in the lining of a sinus is pathognomonic for bacterial sinusitis. This further reinforces the ongoing misconceptions and leads to additional unnecessary and prolonged treatments with broad-spectrum antibiotics.

Early teaching about migraine emphasized the vascular etiology for headache pain. A more contemporary theory of migraine centers on the nervous system as being the initiator of the process and the blood vessel involvement occurs as a consequence of the neuronal process. The neurovascular model of migraine identifies the process as starting in the central nervous system followed by sensitization of the peripheral neurons of the trigeminal nerve, including those that supply the meninges. Once activated, there is a massive vasodilation of the vessels supplied by the neuronal distribution involved which results in the subsequent symptoms of pressure, throbbing, increased pain with motion, congestion, rhinorrhea and lacrimation. Other classic symptoms such as photophobia, phonophobia, nausea and vomiting can be present to varying degrees.
How common is this really? The sinus headache/migraine relationship has been studied exhaustively in recent years with consistently corroborating results. In the largest multi-center study published in the neurology literature, the American Migraine Study II with 30,000 participants, self-diagnosed sinus headache is migraine 90% of the time and a very small percentage of sinus headaches are actually related to bacterial sinusitis.

The challenge for most clinicians is evaluating a patient with acute onset symptoms. Even migraine sufferers can have sinusitis. As with most evaluations, one must start with a history. Since most acute nasal and sinus infections are viral, we generally want to look for worsening symptoms after a period of congestion. There may be localized pain or tenderness, halitosis, fever, purulent nasal discharge or maxillary teeth pain. Thick green or yellow mucous from the nose is not purulence and is a common symptom of a viral URI, chronic rhinitis and/or a side effect of medications that dry secretions. Repeated presentations with the same symptoms, especially when one elicits the symptom of pain, should raise the suspicion of a non-infectious etiology for the symptoms and evaluation by an otolaryngologist should be considered to help make the proper diagnosis.

In summary, "sinus headache" is a common clinical presentation to all physicians who treat nasal and sinus complaints. Familiarity with the clinical diagnosis and treatment of migraine is necessary to treat the enormous volume of patients we see with this complaint appropriately and expeditiously. Over 90% of patients presenting for recurring sinus headache actually have migraine. A large number of migraine patients have rhinologic symptoms including nasal congestion, rhinorrhea and post-nasal drip which contribute to misdiagnoses. Patients who present with repeated bouts of facial pain and pressure in the V1 and V2 trigeminal distribution require a higher level of evaluation to accurately diagnose the etiology and find rational treatment options for better long term control.

— Kevin Braat, MD

DOCTORS TRAVEL TO CHILE

The International Surgical Mission Support Team New York, chaired by Medhat Allam, MD travelled to Linares Hospital in Chile on April 4 and returned 15 days later. In addition to Dr. Allam, team members from Southampton Hospital included gynecologists Vito Alamia, MD and Geri Schmitt, MD; plastic surgeon Joseph DeBellis, MD; Bob Mineo, RNCA; OR nurses Patricia Mitchell, RN and Hollisue Crennan, RN; and recovery room nurse Erin Grismer, RN. Rajesh Patel, MD from Peconic Bay Medical Center was also a team member.

The team had planned to visit the country in 2010, following an 8.8-magnitude earthquake that caused considerable devastation, but it wasn't until recently that they were able to make plans with assistance from North Sea resident Isabel Sepulveda-de-Scalon who is a Chilean native, and Gloria Garafulich-Grabois, director of the Gabriela Mistral Foundation. The team's goal is always the same: provide free surgical care, share medical knowledge, and donate supplies. Linares Hospital, like the others who have benefitted from a medical visit from ISMS in the past, is ill-equipped and has a backlog of thousands of patients, according to Dr. Allam. Congratulations to all of you for your good work!

Southampton Hospital Adopts “No One Dies Alone” Program

Committed to providing compassionate patient care, Southampton Hospital has recently adopted the national “No One Dies Alone” (NODA) program. If an individual is alone in their final hours for any reason, a volunteer is assigned by nursing management to provide comfort at the end of his or her life. Nursing experience is not necessary. So far, 18 volunteer members in the program have been trained. In some cases, a volunteer will sit with a patient until a family member arrives or to give families respite during their vigil. These compassionate companions stay by the side of a patient in four-hour shifts, holding a hand, making sure the patient is comfortable and providing the emotional support they need.

Patricia A. Darcey, VP and Chief Nursing Officer comments, “Every life has value at Southampton Hospital, and we feel strongly that no one should be alone without comfort and companionship as they pass from this life. To find out more about this volunteer opportunity, please contact Jane Edelman, RN, OCN in the Hospital’s Palliative Care Program at (631) 726-3200.”