



Physician Update

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Evidence suggests options for treating recalcitrant CRS patients are growing

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Centering Pregnancy model can result in reduced preterm births, higher birth rates

Evidence suggests options for treating recalcitrant CRS patients are growing



By Norris K. Lee, M.D.

Though chronic rhinosinusitis (CRS) is a common disorder, its cause is poorly understood and may be multi-factorial. The name suggests, perhaps erroneously, that this diagnosis is the same as acute sinusitis, though longer in duration.

The symptoms are the same as in acute sinusitis, although perhaps slightly less severe: headache over/between/under/behind the eyes; midfacial congestion; nasal obstruction; and postnasal drip that can cause throat irritation, globus sensation, cough, asthma, upset stomach, stuffy ears, and hoarseness. These symptoms can be caused by rhinitis alone, which must be differentiated from CRS; additionally, making the proper diagnosis of sinusitis is complicated by the fact that chronic sinusitis often occurs simultaneously with rhinitis (hence the term CRS). The only way to truly diagnose chronic sinusitis is via CT scan, but obtaining a CT scan is often delayed until surgery is considered.

Typically, if CRS is suspected, the initial response is to treat any co-existing rhinitis with antihistamines (pills and/or topical nasal spray), nasal steroid sprays, oral anti-inflammatories such as Singulair or sometimes oral steroids for a short duration, and saline sprays in the nose as a dilutant (“the solution to pollution is dilution”). Additionally, potential contaminants in the environment (home and work) are identified, and suggestions for cleaning the environment are presented. These recommendations may include installing a HEPA air purifier,

obtaining a dust mite cover (and cleaning it with a HEPA vacuum cleaner), and removing carpets, rugs, and fluffy toys. The importance of minimizing pollutants entering the nose cannot be understated. Patients should be educated on nasal physiology. (The “Nasal Education” handout reinforces information provided in the office. It is important that patients understand that most rhinitis, allergic or non-allergic, is manageable but not curable.)

After any accompanying rhinitis is ruled out as a major source of the patient’s symptoms, treatment of chronic sinusitis may commence. Definitive diagnosis of chronic sinusitis can only be made with a CT scan. It is important to remember that sinusitis documented on CT doesn’t have to be treated if the patient is asymptomatic. Continued treatments are based on the severity and duration of symptoms. Typically, a course of antibiotic yields improvement if infectious sinusitis exists, and the duration of a symptom-free condition determines whether more antibiotics are indicated. If a second course of antibiotic is needed, a Medrol Dosepak can reestablish aeration of the sinuses and prevent a recurrence. If symptoms persist or recur, a third course of antibiotic (usually a quinolone) may be prescribed. Surprisingly, evidence-based treatment protocol directing how many courses of antibiotic are necessary before sinus surgery is indicated is not available in rhinologic literature.

When multiple courses of antibiotics yield no lasting freedom from symptoms, CT scan of the sinuses is indicated. If the scan shows thickening of the sinus mucoperiosteal membranes then endoscopic sinus surgery may be recommended. Anatomic variants that may predispose the sinuses to frequent ostial obstruction (e.g., conchae bullosae, deviated nasal septum, thickened mucosae in

the middle meatus) are usually an indication for surgery, as they predispose the patient to recurrent bouts of acute sinusitis. The theory underlying sinus surgery is that a healthy sinus will ensue as long as the ostia are clear. Establishing long-term ostial patency is the main objective of endoscopic sinus surgery. New technology suggests that patency can be achieved by merely balloon-inflating the ostia, without removing tissue, but this technique has not been thoroughly investigated.

In the 1990s, despite aggressive and repeated ostial cleanings, a percentage of CRS patients remained uncured. Clearly, these patients had more than a need for ostial patency. It was suspected that they had underlying immunologic abnormalities. A group from The Mayo Clinic reported in 1997 that 100 percent of their CRS patients had allergic fungal reactivity as the main cause of their sinusitis. They presented good evidence for an over-zealous immunologic reaction that released basic metabolic protein (BMP) to eradicate the noninvasive but serendipi-

tously-present fungal organisms (these were ubiquitous, normally non-pathogenic fungi). However, their results have been difficult to duplicate. The debates and heated discussions rage on. Treatment for CRS remains: full endoscopic sinus clean-out, followed by topical anti-fungal spray, in addition to the usual nasal treatments. However, with this regimen, the incidence of recurrent sinusitis is high, especially in patients with severe opacification and nasal polyposis on pre-op CT scans. Repeated sinus surgery is not uncommon; this is facilitated by 3-D CT scanning that allows endoscopic surgery with greater confidence in scarred and previously violated



spaces. Fortunately, we now have endoscopic systems with high-definition video capabilities, allowing excellent visualization of a region where a millimeter separates the scope from CSF leak, intracranial hemorrhage, and orbital damage. Newer technology allows the surgery to be performed without post-operative packing, making the surgical experience much more pleasant for patient and surgeon as there is no packing to remove post-op, and the patient's first post-op visit is 15 days later. The need for surgery is determined by the patient's symptoms. If symptoms remain minimal even if polyps are seen post-operatively, no intervention is recommended until symptoms develop.

Due to suboptimal results in patients with severe CRS with nasal polyposis, conservative recommendations suggest nasal polypectomy in patients with only nasal obstruction as a complaint. Some of these patients have such longstanding disease that they have no significant symptoms other than nasal obstruction. In such cases, only nasal-only polypectomy may be necessary, with the full knowledge that the polyps will assuredly recur, although along an indeterminate timeline. In patients with chronically obstructed sinus ostia, it is important to avoid systemic antibiotics, if possible, for fear of developing a resistant bacterial population that may become symptomatic, possibly leading to sinus surgery with little hope of a cure.

"Unofficial" studies at Columbia-Presbyterian and in Germany have shown good empiric evidence of impressive results in difficult CRS patients by utilizing post-operative doxycycline at sub-antimicrobial dosages (50 mg/day). Evidence reported in the oral surgery and basic science literature indicates these dosages may have anti-inflammatory effects in vitro, inhibiting matrix metalloproteinases. Future options for recalcitrant CRS patient are brighter than anytime in the past 20 years.

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Centering Pregnancy model can result in reduced preterm births, higher birth rates



By Jessie Anderson, C.N.M.

Centering Pregnancy is an alternative method of providing prenatal care in a non-medical setting that has demonstrated improved health outcomes for pregnancies, including increased birth weight and gestational age of mothers who deliver preterm.

In a multi-site study conducted by Yale University, Emory University, and the Yale Center for Clinical Investigation's Community Alliance for Research and Engagement (CARE) program there was a 33 percent reduction in the number of preterm births amongst women who participated in Centering. (Ickovics, 2007)

Furthermore, the study showed that women participating in group prenatal care are more likely to receive adequate prenatal care and care that was more satisfying. In fact, both mothers and providers expressed increased satisfaction with this prenatal care model. Mothers also reported that due to the increased knowledge they attained through the care model, they felt better prepared for labor and delivery, and were more likely to begin breastfeeding. Centering Pregnancy mothers also experienced a reduction in emergency department visits by their third trimester.

The Centering Pregnancy care model integrates health assessment, education, and support into a unified program that takes place in a group setting. The groups usually consist of eight to 12 women with similar due dates. They meet to learn new skills and participate in facilitated discussions. The program format helps mothers-to-be develop a support network with each other. The overall impact of Centering Pregnancy is the empowerment of women to choose health-promoting behaviors and obtain and record health assessment data such as weight and blood pressure.

During the initial visit with her midwife — and prior to beginning the group meetings — the expectant mother participates in a review of her health history and a complete physical exam. During this visit, any necessary lab testing is conducted.

Group prenatal care begins at approximately 15 to 18 weeks gestation. The group meets every month, and later every two weeks until the end of the pregnancy. Partners are encouraged to join the sessions and the same midwife and nurse are present during group meetings. Guest speakers make presentations at various sessions. Each group meets for a total of 10 sessions throughout pregnancy and early postpartum. The midwife conducts standard physical health assessments for women and babies. Group prenatal care is considered routine prenatal care by most insurance companies, and is therefore usually reimbursable.

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