

CAAC Sinus Center of Excellence Web Site Essay

August 27, 2010

CAAC Introduces the Sinus Center of Excellence

A large number of patients with nasal allergies often also suffer from sinus problems. Given the intimate structural association of the nose and sinuses, this is not a surprise. In fact, because of this close connection, the term “rhinosinusitis” has recently been adopted (“rhino” for nose, and “sinusitis” for inflammation of the sinuses). It is very common for people with allergic nasal allergies to have recurrent or even chronic lingering sinus inflammation and infection. **Chronic sinusitis can be extremely frustrating** for many patients, and it can be difficult to find a physician with the expertise to treat this.

The sinuses are really just hollow cavities in the skull bone that drain through very small channels into the nasal passages. **Diagram #1** shows the physical connections between the nose and the sinuses. (Dr Koepke, one of our CAAC physicians, developed this for a medical journal article he wrote and is now used by the American Academy of Allergy, Asthma, and Immunology as part of their teaching program for physicians around the country.) **Diagram #2** shows the same structures from a sinus CT scan. Sinusitis develops when there is blockage of the natural flow of mucus out of the sinuses and into the nose. This can happen during a viral cold, or when nasal allergies cause swelling of the nasal passages and production of excess amounts of nasal mucus. **Diagram #3** is a sinus CT scan showing the sinuses almost completely filled up with mucus.

Specialists who care for patients with allergies have always evaluated and treated patients with sinusitis. Traditionally, surgical specialists (ear, nose, and throat surgeons) have been considered the “first line” of evaluation and treatment for sinus problems. However, more recently **chronic sinusitis has been considered to be a medical condition that only occasionally requires surgery**. Because **chronic sinusitis is primarily a medical condition, the primary source of evaluation and treatment of sinusitis should rest with a physician with sinus disease expertise**. As a result, we at CAAC have created the “Sinus Center of Excellence” to evaluate and treat this condition.

Our Sinus Center at CAAC can thoroughly evaluate and treat your sinus condition.

Our evaluation includes a number of steps aimed at understand the cause(s) of your sinusitis. Your CAAC doctor will work with you to decide which one of these is most appropriate for you. :

1. A **complete history** of your sinusitis including the nature and severity of your symptoms, how these symptoms are affecting your **quality of life**, and what kinds of treatments you have used in the past.
2. **Evaluation of related conditions** that can be worsening your sinusitis including asthma, gastroesophageal reflux (heartburn), aspirin allergy, and structural nasal problems.

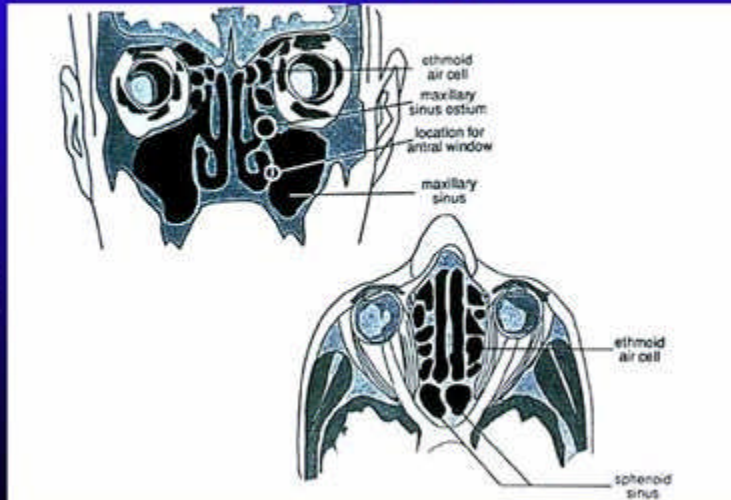
3. Evaluation of how allergic factors are contributing. We do this by **allergy skin testing**.
4. Further visual evaluation of the nasal and sinus passages by **nasal endoscopy**. Under local anesthesia, your doctor uses a flexible scope to better assess the structures in the nasal passages as well as and prior sinus surgery you may have had. Often, we find structural abnormalities or **nasal polyps** that are complicating your sinusitis.
5. **Samples of the nasal or sinus mucus can be cultured** in the laboratory to determine if bacteria or fungi are present. Cultures can help us to more accurately choose the right medications to treat infections.=-
6. A **sinus CT scan** may be ordered to assess the degree of sinus inflammation as well as to help evaluate the extent of past surgery. It is almost always more helpful than a plain X-ray.
7. **Blood work** may be needed to see if there is a problem with the immune system, or other unusual medical causes of sinusitis.

There are now **a number of effective and novel medical approaches to treatment** that can be used to treat your sinusitis.

1. **Nasal sinus irrigations** with saline can cleanse out the sinuses. Innovative approaches to sinus irrigation are often being employed. Often, the use of a stronger salt solution (**hypertonic saline**) can increase the water content of the mucus, helping to clear it out of the sinuses. Sometimes, a small amount of **baby shampoo** added to the saline can help get rid of stubborn infections, called biofilms.
2. Topical nasal steroid sprays are helpful for nasal allergies, but do not gain access into the sinuses. The use of anti-**inflammatory solutions** mixed with saline can be **flushed into the sinuses**, helping to reduce inflammation.
3. Allergy immunotherapy ("**allergy shots**") can reduce the allergic sensitivities contributing to sinusitis.
4. If you are allergic to **aspirin**, **oral aspirin desensitization** can markedly reduce nasal-sinus symptoms, especially if you also have nasal polyps.
5. If there is evidence of infection in the sinuses, **antibiotic treatment** can be helpful. Usually this requires more aggressive treatment than the usual 7-10 courses generally employed and may involve treatment of 3-4 weeks.
6. If you have significant **gastroesophageal reflux**, more aggressive treatment of reflux can be helpful.
7. If your sinus problems still persist, or if **surgery** is necessary we work with a number of qualified ear nose and throat surgeons, and can help coordinate your medical and surgical care.

Chronic sinusitis can be a long-term and frustrating condition for many patients. The goal of our Sinus Center is to take the time to thoroughly evaluate your sinus disease as well as the many factors that can contribute to it. There are many different medical therapies that can also be extremely effective. With our comprehensive approach, we find that the vast majority of patients can be adequately managed, and that surgery can usually be avoided.

Coronal View in Relation to Facial Structure



Koepke, J.W., Dolen, W.K., Spofford, B., & Selner, J.C. (1998). *Rhinology* (2nd ed.). Allergy Respiratory Institute of Colorado.



Diagram #1: shows the relationship of the sinuses to the nasal passages.

Normal Sinus CT Scan through the OMU

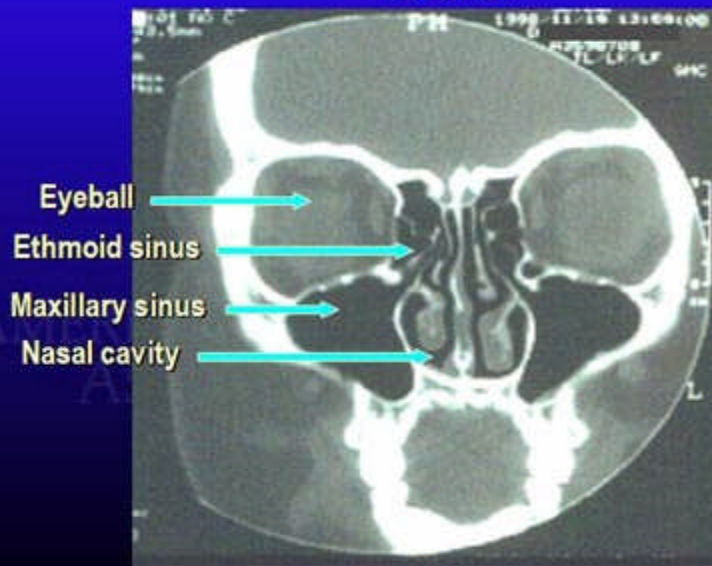
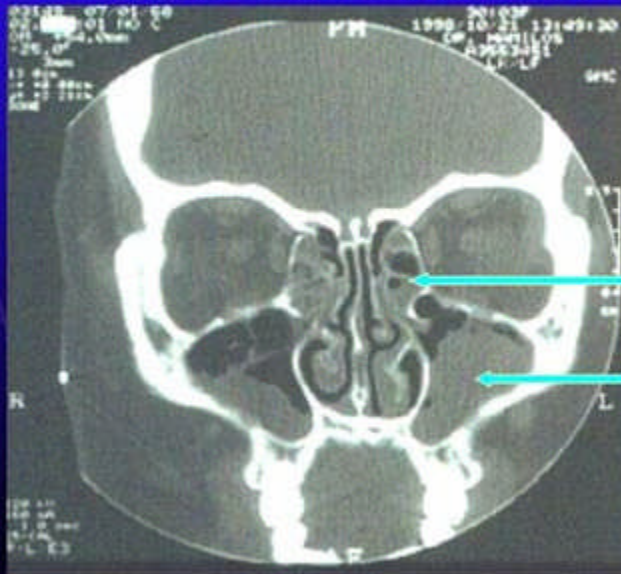


Diagram #2: shows the same relationships as Diagram #1, but with a sinus CT scan.

Obstruction of the OMU with Associated Acute Sinusitis



Sinusitis in the
ethmoid sinus

Sinusitis in the
maxillary sinus

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Diagram #3: shows infection in all the major sinuses.