



Difficult Sinusitis Cases Tackled Successfully

Few doctors associate chronic fatigue with sinusitis. Take the case of a Virginia man who was so tired, he told his physician, that he couldn't mow his lawn. The doctor couldn't pinpoint the cause so he sent him to a rheumatologist. No luck. Similar trips to an internist and an infectious disease specialist yielded nothing for more than a year.

Fortunately, the patient was referred to Joseph Han, M.D., a UVA endoscopic sinus surgeon. Han suspected a sinus condition and ordered a CT scan, which showed that the patient's sinuses were not draining and had become infected. He prescribed an antibiotic for a sinus infection and prednisone to relieve inflammation. The patient's condition improved, but as Han expected the patient's symptoms returned three months later. Han then operated on the patient, opening up the sinus passageways that allow air and mucus to flow freely to and from the nose. Since then, the patient's quality of life has improved dramatically. "No one expects that sinus problems could be so debilitating," Han said.

Sinusitis is a common problem. More than 30 million cases of chronic sinusitis are reported each year in the U.S., and patients spend more than \$4 billion annually on medicine to combat sinus problems.

EXPERT IN DIFFICULT SINUS CASES

Han's expertise comes from the array of difficult sinus cases he has handled. Most of his patients have already had sinus surgery and have conditions that involve the frontal sinuses. He often sees patients who had primary surgery that didn't adequately open up the sinus or resulted in scar tissue that blocked the sinus. Han also sees patients with non-typ-



Joseph Han, M.D., a sinus surgeon in UVA's Department of Otolaryngology - Head & Neck Surgery, specializes in complicated sinus cases, particularly those involving the frontal sinuses.

ical sinus problems requiring endoscopic surgery, a still-emerging specialty in which access to the site of the nasal or sinus problem is gained through the nose rather than through open surgery requiring skin incision. These patients may have tumors or cerebral spinal fluid leaking into the sinus, or they may need anterior skull-based surgery. "These revision surgeries are very difficult," Han said, because the anatomy of the nose is completely changed by the initial surgery. To help overcome this challenge, UVA is fortunate to have a CT image-guided system — similar to a global positioning system of the head — that allows Han to gain a clearer picture of where he is operating within the affected sinus. Despite the delicate and dangerous nature of the surgery — because of the sinus's proximity to the eyes and brain — about 90 percent of Han's patients improve after the revision surgeries, resulting in fewer infections, less sinus pressure and better breathing through the nose.



This CT image shows a blocked sinus. Dr. Joseph Han often sees patients who had primary surgery that did not adequately open up the sinus or resulted in scar tissue that blocked the sinus. About 90 percent of Dr. Han's patients improve after undergoing revision surgeries, resulting in fewer infections, less sinus pressure and better breathing through the nose.

INVESTMENT IN EMERGING TECHNOLOGIES

To expand its patient services and expertise in advanced treatment of difficult sinus cases, UVA opened a sinus laboratory in October. The lab is one of only two of its kind in the nation. Thanks to the donations from General Electric and Linvatec, which outfitted the lab with over \$1 million in equipment, UVA will develop new endoscopic techniques for sinus and anterior skull base surgery. Regional otolaryngologists will be welcome to the lab to fine-tune their surgical skills while learning new techniques.

For more information on UVA's sinus program or to refer a patient to Dr. Han, call 434-924-5700 or 800-552-3723.

As with much in modern medicine, sinus treatment is still evolving. UVA researchers are at the forefront of advances in this field by looking for the chemical signals that cause inflammation that leads to sinus problems. They are extracting sinus tissue from patients, growing cell cultures and introducing various irritants to find the specific cause of a patient's sinus inflammation. "We want to find out what is causing the problem and how to stop it at the very beginning," said Han, "rather than just fixing the end result."

EFFECTIVE SURGICAL OPTION FOR COPD

The misconception that not much can be done for patients with severe chronic obstructive pulmonary disease (COPD) still persists. However, for patients with severe emphysema who meet certain criteria, lung volume reduction surgery (LVRS) can improve both their shortness of breath and exercise capacity. The UVA Department of Surgery and Division of Pulmonary and Critical Care Medicine offer LVRS as part of a comprehensive program designed to improve the quality of life for patients with COPD.

UVA began offering surgical approaches to COPD in the 1990s and has performed more than 60 LVRS procedures and 220 lung transplants. Centers for Medicare and Medicaid Services (CMS) recently began reimbursing for LVRS because of its value to patients. Results of the National Emphysema Treatment Trial (NETT) indicate LVRS benefits emphysema patients who have significant limitation of activity and a heterogeneous pattern of disease on a CT scan. In many patients, outcomes such as mortality, exercise capacity and quality of life were better in patients undergoing LVRS along with medical therapy than medical therapy alone.

During LVRS, surgeons remove 20-30 per-



Image shows a normal (top) airway and one damaged by COPD.

cent of the damaged lungs. By reducing lung size, the remaining lung and surrounding muscles (intercostals and diaphragm) are able to work more efficiently and make breathing easier.

BEST CANDIDATES FOR LVRS

LVRS should be primarily reserved for patients with severe emphysema, FEV₁ (forced expiratory volume) of less than 35 percent, and those with worse disease in the upper lobes. For patients with worse disease in the lower lobes, LVRS may be beneficial in those with significant exercise limitation. Ideally, patients

should have successfully stopped smoking and be on a course of oxygen therapy before evaluation for LVRS. "Careful patient selection and accurate localization of the diseased target areas is essential," says David Jones, M.D., assistant professor of surgery. "Our skilled anesthesiologists, precise operative approach and dedicated postoperative support help patients recover and improve the quality of their day-to-day lives."

NEW COPD TREATMENTS

In addition to surgery, UVA offers a full spectrum of services for COPD patients. "Our program includes tailored patient education, monitoring and prevention efforts, cutting-edge pharmacologic treatments, access to clinical trials highlighting new pharmaceutical agents, and rehabilitation," notes Jonathon Truweit, M.D., chief of the UVA Division of Pulmonary and Critical Care Medicine.

Truweit adds that a promising new minimally invasive alternative to surgery for COPD — a small interbronchial valve inserted directly into the lung — will soon be tested at UVA as part of a national clinical trial.

For a consultation or to refer a patient with COPD, call Dr. Truweit at 434-924-5219, ext. 3.