

# Potential Blood Test for Chronic Sinusitis Identified

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They used a sophisticated research tool that rapidly assesses expression of large numbers of proteins and found among 96 chronic sinusitis patients a profile missing in 38 healthy controls.

“We can diagnose this disease with a totally objective test that does not

depend on symptoms or observations,” says Dr. Stilianos E. Kountakis, vice chair of the Department of Otolaryngology-Head and Neck Surgery in the Medical College of Georgia School of Medicine. He is corresponding author on the study published in the March/April issue of American Journal of Rhinology.

Diagnosing this chronically irritating disease, characterized by dripping noses, sinus pressure, congestion and difficulty breathing, currently is rather subjective. Patients talk about symptoms and doctors look at their sinuses with an endoscope and probably a computerized tomography scan. “... (O)verall management of (chronic sinusitis) is still hampered by the lack of quantifiable, molecular and genetic markers to aid in screening,” researchers write.

To be classified chronic, the misery has to continue for at least 12 weeks. Causes include bacterial infections, respiratory inflammation, sinus polyps and mucosal disease. Some causes, such as polyps and asthma, have a genetic predisposition. “You may have a bacterial infections, allergies, mechanical problems,” Dr. Kountakis says. “There are numerous genes that control respiratory function. Any of these things can go wrong to predispose the patient to develop chronic sinusitis.”

Treating it isn’t much more straightforward. Surgery can help correct anatomical causes such as deviated septums or polyps. However, there are no FDA-approved drugs specifically to treat chronic sinusitis. Instead, physicians use drugs that treat symptoms: steroid sprays for inflammation, mucus thinners, saline irrigation, etc. “It’s difficult to show drugs are effective because it’s difficult to group patients together and measure their disease,” says Dr. Kountakis.

He hopes further studies will enable both, revealing signature protein profiles for different types of chronic sinusitis as well as the degree of disease. “The bottom line is we want to group patients according to their

disease rather than just the general term chronic sinusitis,” Dr. Kountakis says. “If we can find a way to classify patients, group them together based on the specific disease they have, maybe we can get better outcomes and treat patients with better efficiency.”

These objective measures should allow monitoring the effectiveness of current therapies and objectively reviewing new ones, he says.

In fact, even getting a handle on disease incidence is tough. The National Health Interview Survey, based on self-reports, says 14 to 16 percent of people in the United States have chronic sinusitis. A population-based study of the Olmsted County, Minnesota published in 2004 in Archives of Otolaryngology-Head & Neck Surgery put the incidence at 2 percent.

For this study, researchers analyzed protein expression in the blood using surface enhanced laser desorption ionization time-of-flight mass spectroscopy or SELDI-TOF-MS. The test is about 88 percent accurate.

Source: Medical College of Georgia

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