

# Allergen-Specific IgE Linked to Depression

BY DOUG BRUNK

FROM THE ANNUAL MEETING OF THE AMERICAN PSYCHIATRIC ASSOCIATION

Allergen-specific immunoglobulin E and allergy symptoms are associated with worsening of depression scores in patients with mood

**VITALS** **Major Finding:** IgE levels predicted worsening of depressive symptoms during high pollen season in patients with recurrent mood disorders.

**Data Source:** A blinded study of 100 patients.

**Disclosures:** The National Institute of Mental Health funded the study. The researchers had no relevant financial disclosures to make.

disorders who are exposed to seasonal pollen peaks, preliminary results from a novel study suggest.

"We already know that depression is a very common disorder, but allergy is even more common," Dr. Partam Manalalai of the mood and anxiety program in the department of psychiatry at the University of Maryland School of Medicine, Baltimore, said at a press briefing.

"One in every two people might have some kind of sensitivity to some allergen, and one in five people may have allergic rhinitis. During exacerbations of allergic rhinitis, people experience worsening of mood, cognition, and overall well-being."

Dr. Manalalai went on to note that there is a spring peak in pollen count that corresponds with tree pollen, while there is a somewhat smaller fall peak in pollen count, which corresponds with ragweed and grass pollen. At the same time, he said, several previously published studies have found a peak in the rate of completed suicides in the spring, and a somewhat smaller peak in the fall.

"To our knowledge, this is the first report of a biological marker of allergic sensitization (allergen-specific IgE) predicting worsening in depressive symptoms during the high pollen season," Dr. Manalalai said.

"In a group of patients with allergy and depression, prophylactic treatment of these conditions may prevent worsening of mood during peak allergen season. Our findings may be conducive to research on new preventative and therapeutic targets in the management of mood disorders."

In the study, researchers blinded to the patients' IgE status evaluated 100 patients from Baltimore and Washington, with diagnoses of recurrent mood disorder—once during a low pollen period and once during the preceding or subsequent peak high pollen period.

Patients taking antihistamines and decongestants were included in the analy-

sis, but those with active substance-related or psychotic disorders were excluded, as were those taking montelukast or intranasal corticosteroids.

The researchers administered the Structured Interview Guide for the Hamilton Depression Rating Scale-Seasonal Affective Disorder Version and the Allergy Symptom Severity Assessment and compared the scores during the low and high pollen periods.

As recommended by the National Allergy Bureau, they conducted volumetric sampling for pollen in grains/m<sup>3</sup>, a process that allowed them to match sensitization to exposure to seasonal allergens. Dr. Manalalai and his associates defined sensitization at 0.35-kUa/L allergen-specific IgE levels using ImmunoCAP 250.

The mean age of patients was 44 years, and 60 were men. Nearly half (47) were IgE positive for tree and/or ragweed pollen, while the rest (53) were IgE negative.

Dr. Manalalai reported that changes in typical depression scores were significantly related to worsening of allergy symptoms ( $P = .008$ ) while changes in atypical depression scores were significantly related to allergy-specific IgE positivity ( $P = .033$ ), but not to worsening of allergy symptoms.

"The worse the allergy symptoms, the worse the depression scores," Dr. Manalalai said.

Specifically, during low pollen season, the mean SIGH-SAD score for those in the allergen-specific IgE-positive group who had typical depression was 11.77, compared with a mean score of 9.8 for their counterparts in the allergen-specific IgE negative group. The SIGH-SAD score was also higher for those in the allergen-specific IgE-positive group who had atypical depression (a mean of 5.27, compared with a mean of 4.37 for their counterparts in the allergen-specific IgE negative group).

During high pollen season, the mean SIGH-SAD score for those in the allergen-specific IgE-positive group who had typical depression was 11.54, compared with a mean score of 9.76 for their counterparts in the allergen-specific IgE negative group.

The SIGH-SAD score was also higher for those in the allergen-specific IgE-positive group who had atypical depression (a mean of 6.9, compared with 5.13 for their counterparts in the allergen-specific IgE negative group).

In a later interview, lead author Dr. Teodor T. Postolache, who directs the University of Maryland psychiatry department's mood and anxiety program, pointed out that these mean scores "need to be adjusted for C-reactive protein. C-reactive protein changes were used in the models to adjust for and minimize the masking effects of nonallergic inflammation during the duration of the study (such as virus infections, sinus infections, to name a few)." ■

# Aneurysmal Coiling Often Leads to Acute Headache

BY AMY ROTHMAN SCHONFELD

FROM THE ANNUAL MEETING OF THE SOCIETY OF NEUROINTERVENTIONAL SURGERY

CARLSBAD, CALIF. — Nearly three quarters of patients had an acute headache after endovascular coiling of cerebral aneurysms in a review of a 3-year period at a single center.

The postprocedural headaches occurred significantly more often in women, smokers, and patients with a preprocedural history of headache or anxiety and depression, according to Dr. Eric P. Baron.

"Optimized risk-factor management prior to coiling may help decrease the occurrence of postcoiling headache.

"The presence of these risk factors may also help predict those more likely to complain of postcoiling headache and help guide clinical decisions of neuroimaging or other testing.

However, good clinical judgment should always supersede in these decisions," said Dr. Baron, a neurologist who is affiliated with the Center for Headache and Pain at the Cleveland Clinic Neurological Institute.

Although urgent diagnostic procedures to evaluate postcoiling headaches proved unhelpful, Dr. Baron and his colleagues found that triptans or dihydroergotamine (DHE) safely treated both pre- and postcoiling headaches in a small group of migraineurs.

Headache was also common in aneurysm patients before coiling, both for those who underwent emergent and elective coiling. Coiling resolved headaches in a small proportion of these patients, he noted.

"Triptans and DHE may not necessarily be a contraindication in all migraineurs with pre- and postcoiling headache, and aneurysmal coiling may actually resolve preexisting headaches in a select group of patients, but at this time, predicting that group of patients is unclear.

"Ultimately, further prospective studies are necessary to better evaluate all of these trends," Dr. Baron said.

The investigators reviewed the records of 263 adult patients (200 women and 63 men) who underwent either emergent or elective intracranial endovascular coiling for aneurysm treatment between July 2006 and June 2009.

Patients with skull defects, ventricular shunt placement, cranial trauma, extracranial procedures, and intracranial neoplasms or infections were excluded.

Most (76%) of the aneurysms were located in the anterior circulation; 24% were in the posterior circula-

tion. A headache developed following coiling in 189 (72%) patients.

A significantly greater percentage of patients with headaches were women (81%).

More women overall also developed postcoiling headache than did men (77% vs. 57%).

Smoking was a significant risk factor for postprocedural headache. A majority of patients (56%) with postcoiling headaches were smokers, and 85% of all smokers developed postcoiling headache.

The incidence of postcoiling

**VITALS** **Major Finding:** Postprocedural headaches occurred in 72% of patients who underwent intracranial endovascular aneurysmal coiling.

**Data Source:** A retrospective chart review of 263 patients who underwent intracranial endovascular aneurysmal coiling.

**Disclosures:** Dr. Baron had no relevant disclosures.

headache was higher in women who smoked than it was in men who smoked (90% vs. 70%, respectively).

Postcoiling headaches also affected 86% of patients with either anxiety or depression.

Postprocedural headaches were significantly more likely to occur among patients who experienced headaches prior to undergoing endovascular coiling, regardless of the length of time they had had them, the review found.

Headache complaints spurred 118 urgent diagnostic procedures, including 69 noncontrast CTs, 7 CT angiograms, 29 MR scans (including angiography and venography), 5 cerebral angiograms, and 8 lumbar punctures. All were negative for an acute process that was felt to be the cause of the headache.

"Excessive diagnostic testing is often obtained in patients with prior intracranial endovascular coiling. Results are frequently low yield and may lead to unnecessary risks and costs," Dr. Baron said.

Pre- and postcoiled aneurysms often are considered a contraindication for the use of triptans or ergots such as DHE to treat headaches in migraineurs, according to Dr. Baron. But in this cohort, triptans were used without incident in 10 cases before coiling and in 10 cases after coiling; DHE was used for one patient after coiling.

Headaches resolved after coiling in a small proportion of patients, including 27% of patients who underwent emergency coiling, 16% of patients who had headaches for less than 1 year before elective coiling, and 11% of patients who had headaches for 1 year or longer before elective coiling. ■