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The Diagnosis and Incidence of Allergic Fungal Sinusitis

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To reevaluate the current criteria for diagnosing allergic fungal sinusitis (AFS) and determine the incidence of AFS in patients with chronic rhinosinusitis (CRS).

Methods

This prospective study evaluated the incidence of AFS in 210 consecutive patients with CRS with or without polyposis, of whom 101 were treated surgically. Collecting and culturing fungi from nasal mucus require special handling, and novel methods are described. Surgical specimen handling emphasizes histologic examination to visualize fungi and eosinophils in the mucin. The value of allergy testing in the diagnosis of AFS is examined.

Results

Fungal cultures of nasal secretions were positive in 202 (96%) of 210 consecutive CRS patients. Allergic mucin was found in 97 (96%) of 101 consecutive surgical cases of CRS. Allergic fungal sinusitis was diagnosed in 94 (93%) of 101 consecutive surgical cases with CRS, based on histopathologic findings and culture results. Immunoglobulin E-mediated hypersensitivity to fungal allergens was not evident in the majority of AFS patients.

Conclusion

The data presented indicate that the diagnostic criteria for AFS are present in the majority of patients with CRS with or without polyposis. Since the presence of eosinophils in the allergic mucin, and not a type I hypersensitivity, is likely the common denominator in the pathophysiology of AFS, we propose a change in terminology from AFS to eosinophilic fungal rhinosinusitis.

Abbreviations:

AFS (allergic fungal sinusitis), CRS (chronic rhinosinusitis), CT (computed tomographic), IgE (immunoglobulin E), RAST (radioallergosorbent test)

