Objectives/Hypothesis Although the diagnosis of allergic fungal sinusitis is mainly based on characteristic histopathological findings, certain preoperative diagnostic criteria have been proposed. However, their usefulness in differentiating allergic fungal sinusitis from other sinus diseases is unknown. The objective of the study was to identify accurate preoperative diagnostic parameters for allergic fungal sinusitis.

Study Design Prospective, comparative study.

Methods Twenty consecutive cases of allergic fungal sinusitis were evaluated prospectively and compared with 16 cases of ethmoidal polyposis and 5 cases of invasive sinus aspergillosis, with regard to various clinical, radiological, and immunological parameters. All patients were categorized based on histopathological findings.

Results Nasal polyps were seen in all 20 cases of allergic fungal sinusitis, all 16 cases of ethmoidal polyposis, and 2 of 5 cases of invasive sinus aspergillosis. Computed tomography (CT) scan hyper-attenuation was seen in all 20 cases of allergic fungal sinusitis but also in 2 (13%) cases of ethmoidal polyposis and 2 (40%) cases of invasive sinus aspergillosis. Serum levels of specific anti-Aspergillus immunoglobulin E were elevated in 14 (70%) cases of allergic fungal sinusitis, 2 (13%) cases of ethmoidal polyposis, and 3 (60%) cases of invasive sinus aspergillosis. The combination of all three (ie, nasal polyps, CT scan hyper-attenuation, and elevated titers of anti-Aspergillus immunoglobulin) was not found in any case of ethmoidal polyposis or invasive sinus aspergillosis. This triad demonstrated a sensitivity of 70% and a specificity of 100% for the preoperative diagnosis of allergic fungal sinusitis.

Conclusions Nasal polyps, CT scan, and specific immunoglobulin E titers, when considered in combination, have a high preoperative diagnostic value in allergic fungal sinusitis. However, they should not be considered in isolation because considerable overlap occurs with invasive sinus aspergillosis and ethmoidal polyposis.