Clin Infect Dis. 2007 Feb 1;44(3):373-9. Epub 2006 Dec 29.

Comment in:
Clin Infect Dis. 2007 Feb 1;44(3):380-1.
Clin Infect Dis. 2007 Jun 15;44(12):1666-7; author reply 1667-8.

Imaging findings in acute invasive pulmonary aspergillosis: clinical significance of the halo sign.

Greene RE, **Schlamm HT**, **Oestmann JW**, **Stark P**, **Durand C**, **Lortholary O**, **Wingard JR**, **Herbrecht R**, **Ribaud P**, **Patterson TF**, **Troke PF**, **Denning DW**, **Bennett JE**, **de Pauw BE**, **Rubin RH**.

Massachusetts General Hospital, Boston, MA 02114, USA.
greene.reginald@mgh.harvard.edu

BACKGROUND: Computed tomography (CT) of the chest may be used to identify the halo sign, a macronodule surrounded by a perimeter of ground-glass opacity, which is an early sign of invasive pulmonary aspergillosis (IPA). This study analyzed chest CT findings at presentation from a large series of patients with IPA, to assess the prevalence of these imaging findings and to evaluate the clinical utility of the halo sign for early identification of this potentially life-threatening infection. METHODS: Baseline chest CT imaging findings from 235 patients with IPA who participated in a previously published study were systematically analyzed. To evaluate the clinical utility of the halo sign for the early identification and treatment of IPA, we compared response to treatment and survival after 12 weeks of treatment in 143 patients who presented with a halo sign and in 79 patients with other imaging findings. RESULTS: At presentation, most patients (94%) had > or =1 macronodules, and many (61%) also had halo signs. Other imaging findings at presentation, including consolidations (30%), infarct-shaped nodules (27%), cavitary lesions (20%), and air-crescent signs (10%), were less common. Patients presenting with a halo sign had significantly better responses to treatment (52% vs. 29%; P<.001) and greater survival to 84 days (71% vs. 53%; P<.01) than did patients who presented with other imaging findings. CONCLUSIONS: Most patients presented with a halo sign and/or a macronodule in this large imaging study of IPA. Initiation of antifungal treatment on the basis of the identification of a halo sign by chest CT is associated with a significantly better response to treatment and improved survival.

PMID: 17205443 [PubMed - indexed for MEDLINE]