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LETTER TO THE EDITOR

Importance of the reversed halo sign for the diagnosis of angioinvasive pulmonary aspergillosis

To the Editor

We read with great interest the well-written article by Tunnicliffe et al. [1], who reviewed the clinical, radiographic, and histopathological aspects of pulmonary aspergillosis. They briefly mentioned that the reversed halo sign (RHS) has been described in invasive fungal infections (IFIs), although its sensitivity for identifying IPA remains to be tested in a larger number of cases.

As the early diagnosis of IFI relies heavily on computed tomographic findings [2,3], we would like to highlight the diagnostic importance of the RHS. The RHS has been reported in a wide spectrum of diseases, including infectious and noninfectious processes [5], but it is highly suggestive of IFI, particularly pulmonary zygomycosis or IPA, in the context of immunosuppression [2–7]. Wahba et al. [7] demonstrated that 4% of immunocompromised patients with pulmonary IFI exhibited the RHS early in the disease course. The RHS may precede respiratory symptoms in most of these patients [7].

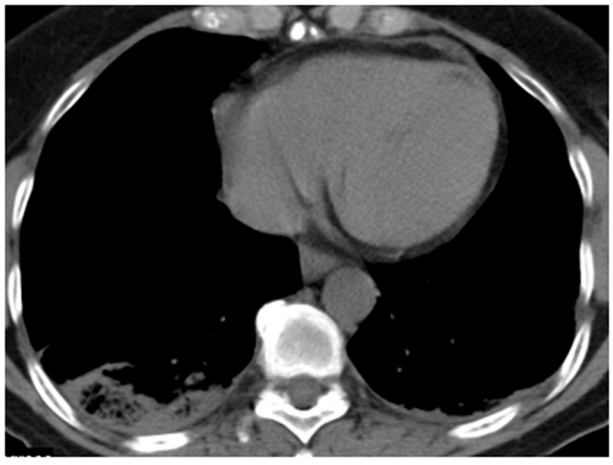

Figure 1 Pulmonary angioinvasive aspergillosis in a 55-year-old man with chronic lymphocytic leukemia. Computed tomographic image shows a reversed halo sign in the right lower lobe. The thickness of the outer consolidation rim is > 10 mm. Note also the reticulation inside the reversed halo sign.

A recent study [8] demonstrated that certain morphological characteristics of the RHS (inner reticulation, outer consolidation rim thickness > 10 mm, presence of a pleural effusion) strongly suggest the diagnosis of IFI (Fig. 1). This diagnosis may be challenging, especially for general radiologists encountering patients outside the context of transplantation centers, and any delay in treatment can significantly increase mortality. The presence of the RHS with the above-described characteristics in a severely immunocompromised host is highly suggestive of IFI.

Conflict of interest statement

All authors inform that there are none conflicts of interest.

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