Clinical picture

Nodular lung calcifications following varicella zoster virus pneumonia

A 39-year-old woman suffering from psoriasis was referred for evaluation of mild arthralgias of the small joints of the hands of recent onset. During diagnostic workup, a chest X-ray revealed multiple randomly scattered, well-defined, dense nodular densities with calcification ranging from 1mm to 1cm (Figure 1A and B). The patient reported no complaints whatsoever. Apart from the psoriatic exanthema of the elbows, the clinical examination of the patient was negative and her laboratory tests were negative as well in terms of systemic inflammatory or infectious disease. Her past medical history was unremarkable with the exception of a prior hospitalization 15 years ago due to varicella zoster virus pneumonia (VZVP) complicating chickenpox. Since that time no further chest X-ray film had been performed and the patient was leading a normal life.

VZVP pneumonia is a serious complication of infection with varicella zoster virus and sometimes it can be life threatening. VZVP is estimated to be the cause of hospitalization in 1 in 400 cases of this infection. It is more common in young men and immunocompromised persons have been reported to be more susceptible, whereas smoking has been recognized as the most important risk factor. It can appear 3–5 days in the course of illness and is usually associated with tachypnoea, cough, dyspnoea and fever. The initial radiological appearance in the chest radiograph is one of ill-defined nodular (2–5mm in diameter) or reticular densities that represent interstitial pneumonitis, best evident in the periphery of the lung. Radiological abnormalities usually resolve, but may persist for weeks or months and in a few cases they calcify and remain indefinitely. Intravenous acyclovir is effective in the treatment of VZVP as well as for other complications of varicella zoster virus infection in adults and children, provided it will be administered early. Recurrence of VZVP has been reported in immunocompromised patients.

Whenever the physician is confronted with disseminated small (<1cm) pulmonary nodules of the lungs, especially with calcification, a history of prior VZVP should always be considered, since it can greatly facilitate the differential diagnosis between tuberculosis, coccidioidomycosis, histoplasmosis and pneumonoconiosis, rendering extensive diagnostic workup unnecessary.

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Figure 1. (A) Face view and (B) profile view of the chest radiograph of the patient showing bilateral nodular calcifications.

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