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Title: Hypersensitivity pneumonitis related to Streptomyces mesophile and Penicillium chrysogenum: The usefulness of the Medical Indoor Environment Counselor (MIEC)

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Body: Introduction: Hypersensitivity pneumonitis (HSP), secondary to the inhalation of organic antigens at home are rare and the diagnosis is very often difficult without home visit. Observation: We report a case of a 55 years male patient, ex-smoker, with an allergic asthma since childhood, well controlled with inhaled corticosteroids, who developed two respiratory distresses during asthma exacerbations. HPS was suspected because of the fever (39°C), the dry cough, rapidly progressive dyspnea, chest pain and crackles. Blood gas analysis found a hypoxemia of 52 mmHg, and the CT-scan showed a few ground glass images in the upper lobes. The respiratory function tests showed a severe obstructive syndrom and a decrease of diffusion test. Allergological investigation: The diagnosis was suspected because the symptoms were linked to domestic environment, triggered by stays in a camper. The (MIEC) visited the house and the camper and performed air and dust samples. Moldy walnuts were found in the camper. The identification of microorganisms presents on the nuts, in the air and in the dust, were used for the search for precipitins in double diffusion (DD) and electrosyneresis (E). Of the 14 antigens tested, serological tests were considered significant for Streptomyces mesophile (5 bands DD, 6 bands E)and Penicillium chrysogenum (1 band DD, 4 bands E). The patient removed the nuts from his camper. Since then, he has not experienced any exacerbation. Conclusion. This is a case of domestic HSP to Streptomyces mesophile and Penicillium chrysogenum. The MIEC’s intervention was useful for the diagnosis and the treatment.