

OCCUPATIONAL ALLERGIC RESPIRATORY DISEASES IN GARBAGE WORKERS: THE RELEVANCE OF MOLDS

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Introduction: Relevant exposures to moulds at workplaces are common in garbage workers, but allergic respiratory diseases due to moulds have been described rarely (e.g. 10 cases of occupational diseases from 2006 to 2010 in Germany; about 250,000 workers in this industry). The aim of our study was the detailed analysis of mould-associated occupational respiratory diseases in garbage workers. **Material and Methods:** From 2002 to 2011 four cases of occupational respiratory diseases relating to garbage handling were identified in our institute (IPA) and analyzed in detail. **Results:** Hypersensitivity pneumonitis (HP) was diagnosed in three subjects (case 1-3, one smoker, two non-smokers), occupational asthma (OA) was diagnosed in one subject (case 4, smoker), but could not be excluded completely in case 2. Case 1 and 2 worked in composting sites, whereas case 3 and 4 in packaging recycling plants. Exposure period in all cases lasted from 2 to 4 years. Only case 3 used breathing protection. Moulds were identified as allergens in all cases (predominantly *Aspergillus fumigatus*). Mould specific IgE antibodies were detected exclusively in case 4 with high concentrations against *Aspergillus fumigatus*. Diagnoses of HP were essentially based on symptoms and the detection of specific IgG serum antibodies, especially to *Aspergillus fumigatus*. Invasive methods and computed tomography of the chest were mostly unavailable and were not considered in the final examination at IPA, because all cases were (almost) free of clinical symptoms and without lung function impairment after exposure cessation in an early stage. The case with OA was confirmed by bronchial provocation test with *Aspergillus fumigatus*. **Conclusions:** Both, occupational HP and OA due to moulds may seldom occur in garbage workers. HP is caused by *Aspergillus fumigatus* mostly after short exposure times of 2 - 4 years. In all cases technical prevention measures were insufficient. During primary examination, diagnosis of patients with HP is often not conclusive, therefore it is highly recommended to implement the full repertoire of diagnostic tools and procedures in the baseline diagnostic.