


Inhalational mold toxicity: fact or fiction? a clinical review of 50 cases

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Abstract

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Background

Three well-accepted mechanisms of mold-induced disease exist: allergy, infection, and oral toxicosis. Epidemiologic studies suggest a fourth category described as a transient aeroirritation effect. Toxic mold syndrome or inhalational toxicity continues to cause public concern despite a lack of scientific evidence that supports its existence.

Objectives

To conduct a retrospective review of 50 cases of purported mold-induced toxic effects and identify unrecognized conditions that could explain presenting symptoms; to characterize a subgroup with a symptom complex suggestive of an aeroirritation-mediated mechanism and compare this group to other diagnostic categories, such as sick building syndrome and idiopathic chemical intolerance; and to discuss the evolution of toxic mold syndrome from a clinical perspective.

Methods

Eighty-two consecutive medical evaluations were analyzed of which 50 met inclusion criteria. These cases were critically reviewed and underwent data extraction of 23 variables, including demographic data, patient symptoms, laboratory, imaging, and pulmonary function test results, and an evaluation of medical diagnoses supported by medical record review, examination, and/or test results.

Results

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Upper respiratory tract, lower respiratory tract, systemic, and neurocognitive symptoms were reported in 80%, 94%, 74%, and 84% of patients, respectively. Thirty patients had evidence of non-mold-related conditions that explained their presenting complaints. Two patients had evidence of allergy to mold allergens, whereas 1 patient exhibited mold-induced psychosis best described as toxic agoraphobia. Seventeen patients displayed a symptom complex that could be postulated to be caused by a transient mold-induced aeroirritation.

Conclusion

The clinical presentation of patients with perceived mold-induced toxic effects is characterized by a disparate constellation of symptoms. Close scrutiny revealed a number of preexisting diagnoses that could plausibly explain presenting symptoms. The pathogenesis of aeroirritation implies completely transient symptoms linked to exposures at the incriminated site. Toxic mold syndrome represents the furtive evolution of aeroirritation from a transient to permanent symptom complex in patients with a psychogenic predisposition. In this respect, the core symptoms of toxic mold syndrome and their gradual transition to chronic symptoms related to nonspecific environmental fragrances and irritants appear to mimic what has been observed with other pseudodiagnostic categories, such as sick building syndrome and idiopathic chemical intolerance.

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