原著論文

室内環境汚染物質及び生活背景と自覚症状との関連

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［受付　2006.1.18］［受理　2006.6.30］

Relationship between Indoor Air Pollutants and Living Environment and Subjective Symptoms

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［Received January 18, 2006］［Accepted June 30, 2006］

要　旨

シックハウス症候群（SHS）は医学的に確立した単一の疾病というよりも，室内空気質に起因する健康障害といえる．発症には様々な環境因子への曝露が指摘されているが，解明が進んでいないものも多い．そこで，SHSの自覚症状と住居環境や住まい方との関連を明らかにすることを目的として，岡山県内において一般住宅を対象に環境測定（室内気中化学物質濃度，空気中真菌濃度，ダニアレルゲン量）及び質問票調査を実施した．何らかの自覚症状がよくある，またはときどきあり，家の環境によるものとするSHSの定義に該当したのは42名（17.0%）であった．単変量解析では，SHS症状と関連する生活背景項目としてカビ臭いにおいがする，家のにおいが気になる，家の空気が悪いと感じる，家具のにおいが気になる，睡眠が不十分，アレルギーの既往でオッズ比が高く，睡眠時間ではSHS群の方が有意に短く，室内環境測定との関連では，アルデヒド類数種の濃度がSHS群の家屋で高く，*Fusarium*属が多く検出された．ロジスティック回帰分析では，SHSと有意な関連がみられたのは，生活背景ではカビくさいにおいがする，家の空気が悪いと感じる，睡眠が不十分であった．室内環境測定では化学物質，ダニアレルゲンの関与は認められなかったが，空気中総真菌濃度のORが高く，SHS群の家屋は真菌濃度が高いと考えられた．

Abstract

Sick House Syndrome（SHS）is characterized by subjective responses to indoor air contamination. Frequent symptoms include eye, skin, and nose irritation, headache, and fatigue. Although some environmental factors have been put forth as being involved in the occurrence of the symptoms, none has been proved. To clarify the relationship between subjective symptoms of SHS, indoor air pollutants, and the living environment, we took environmental measurements of organic compounds, fungal levels, and house dust mite allergens in ordinary houses in Okayama, Japan and administered questionnaires to their inhabitants. We defined persons complaining of one or more of six subjective symptoms related to the dwelling environment as SHS. In this study, 42 people（17.0%）had SHS. Factors significantly related to SHS were: a moldy odor, perception of an odor in the dwelling, a feeling that the air is bad in the dwelling, perception of an odor from the furniture, sleeplessness, and a history of allergic diseases. People with SHS lived in the dwellings with higher concentrations of some aldehydes and *Fusarium*. In multiple logistic regression analysis, significant causative factors of SHS were: a moldy odor, a feeling that the air is bad in the dwelling, and sleeplessness. Although organic compounds and house dust mites showed no relationship to SHS, higher fungal levels were found in the dwellings where people had SHS. These results suggest that dampness in dwellings is an important factor in SHS.

Key words: sick house syndrome, aldehydes, volatile organic compounds（VOC）, house dust mites, mold

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