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Chemosensory function and psychological profile in patients with multiple chemical sensitivity: Comparison with odor-sensitive and asymptomatic controls

MCS patients did not have unusually heightened sense of smell but did have a stronger emotional response to unpleasant and pleasant smells. Combined with the results of other work it would seem that MCS cases have an unusually strong interpretation of perceived exposures.

It is proposed that people with multiple chemical sensitivity (MCS) may have an acute sensitivity to the presence of the proposed trigger for their symptoms. Objective responses to odours can be detected by electrophysiological means.

This study compared MCS cases (n = 23) with people who profess high sensitivity to odours (but no MCS) (n = 21) and with asymptomatic controls (n = 22).

Participation rates were low but the three groups were thoroughly characterised for psychiatric morbidity and atopy. Detection sensitivity and interpretation of smells were recorded using electrophysiological methods.

Olfactory thresholds and odour identification accuracy were indistinguishable in the three groups. Atopy rates were not significantly different across the three groups. Cognitive processing was assessed by electroencephalogram but was indistinguishable from one group to the next. Emotional responses to both pleasant and unpleasant smells were more intense in MCS cases.

Comment

To us, the results tend to indicate that in the majority of the cases selected for this study, MCS is an interpretation based response to perceived chemical exposure. The odours selected for the study were not specific to MCS complaints; further work of the type undertaken here should focus on chemicals to which the MCS case has an adverse reaction.

When the MCS case is completely unaware of exposure but has a predictable reaction to that exposure then this interpretation would not suffice. Blinded exposure trials tend to show that there is no MCS reaction when the patient is not aware of the exposure condition, but this is not universally found.

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