

Neurological symptoms among dental assistants: a cross-sectional study

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Summary

Abstract Background Dental assistants help the dentist in preparing material for filling teeth. Amalgam was the filling material mostly commonly used in Norway before 1980, and declined to about 5% of all fillings in 2005. Amalgam is usually an alloy of silver, copper, tin and mercury. Copper amalgam, giving particularly high exposure to mercury was used in Norway until 1994. Metallic mercury is neurotoxic. Few studies of the health of dental assistants exist, despite their exposure to mercury. There are questions about the existence of possible chronic neurological symptoms today within this working group, due to this exposure. The aim of this study was to compare the occurrence of neurological symptoms among dental assistants likely to be exposed to mercury from work with dental filling material, compared to similar health personnel with no such exposure. **Methods** All dental assistants still at work and born before 1970 registered in the archives of a trade union in Hordaland county of Norway were invited to participate (response rate 68%, n = 41), as well as a similar number of randomly selected assistant nurses (response rate 87%, n = 64) in the same age group. The participants completed a self-administered, mailed questionnaire, with questions about demographic variables, life-style factors, musculoskeletal, neurological and psychosomatic symptoms (Euroquest). **Results** The dental assistants reported significant higher occurrence of neurological symptoms; psychosomatic symptoms, problems with memory, concentration, fatigue and sleep disturbance, but not for mood. This was found by analyses of variance, adjusting for age, education, alcohol consumption, smoking and personality traits. For each specific neurological symptom, adjusted logistic regression analyses were performed, showing that these symptoms were mainly from arms, hands, legs and balance organs. **Conclusion** There is a possibility that the higher occurrence of neurological symptoms among the dental assistants may be related to their previous work exposure to mercury amalgam fillings. This should be studied further to assess the clinical importance of the reported symptoms.