

# A multidisciplinary study of patients with signs or symptoms attributed to dental restorative materials

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## Akademisk avhandling

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Avhandlingen kommer att försvaras på svenska.

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**Abstract**

Anxiety for adverse health effects attributed to dental restorative materials especially dental amalgam, have been discussed extensively off and on the last 30 years. The possible health effect of amalgam and health effect of replacements of amalgam, have been extensively studied but the results are inconclusive and the etiology of the reactions are not entirely elucidated. Furthermore, the question of psychological influence on symptoms attributed to dental restorative materials has been raised and need further examination.

The aims of this thesis were to describe the change in health over time for patient with symptoms attributed to their dental materials and to determine whether replacement of their dental restorative materials had any impact on their perceived health. Furthermore, to determine and describe the personality, self-image, level of psychological symptoms and stress among these patients and compare the results with those of healthy controls. Finally, to evaluate regression of Lichenoid Contact Reactions and Oral lichen Planus after replacement of the dental materials.

A questionnaire was mailed to 614 patients that had been referred to the School of Dentistry, Umeå, Sweden with symptoms attributed to dental materials. Among these patients a subgroup with oral lichen also underwent a clinical examination at follow-up.

The result showed that patients with complex symptoms had a more unfavorable long-term prognosis concerning persistent complaints than those with local symptoms only. The oral symptoms had decreased between baseline and follow-up and the general symptoms had increased. The increase in general symptoms was contradictory since many patients experienced health improvement after removal of their dental restorative materials. Concerning personality the patients was characterized mainly by high persistence and by high fatigability and asthenia as well as psychosocially learned high self-acceptance. Regarding self-image, both patients with Local Symptoms Only and patients with Multi Symptoms, scored significantly higher on "spontaneous" and "positive self-image" than the reference group. The Multi symptoms group scored significantly higher on psychological symptoms compared to the reference group. However, the Local symptoms group did not differ from the references. The remission of oral lesions was after an exchange of dental materials was seen to a greater extent in patients with Lichenoid Contact Reaction than in patients with Oral Lichen Planus. Regarding psychological parameters, there were no significant differences between the groups.

In conclusion symptoms related to dental restorative materials seem to be multi-factorial where dental, medical, social, and psychological factors may be involved. Patient with complex symptoms have a more unfavorable prognosis than patient with local symptoms only. Patient with symptoms self-related to their dental materials may feel improvement in general health after an exchange of dental materials. The group of patients seems to represent personalities that could be vulnerable in the demanding modern society, and the various mental and somatic symptoms can be interpreted as attributed to dental fillings. Patients with Local Symptoms or Multi Symptoms are equal concerning self-image, they are impulsive with an elevated positive self-image, that can result in difficulties in setting limits. Thus in combination with high demands may result in mental stress. The Multi Symptoms group was more psychologically stressed than the group with Local Symptoms Only and the references. Therefore, before an exchange of dental materials is commenced in patients with oral lichenoid lesions, a correct diagnosis is needed.

**Keywords**

Dental restorative materials, environmental intolerance, oral lichen, personality, self-image, psychological symptoms.

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