

ARE WE ALLERGIC TO OUR WORK

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SUMMARY:

Dental materials and medicines possess high allergic potential. They provoke different allergic reactions in patients and staff. The sensibilization of the staff begins still in the dental school. There are several risk groups – the atopic individuals and these with other allergies. The aim of the study is to follow up the development and the connection between the allergic state and the professional etiology and to determine whether allergy is an obstacle for studying and practicing dental medicine.

Key words: allergy, dental materials, students

OBJECTIVES:

Dental materials and medicines possess high allergic potential. They provoke allergic reactions, both in patients and in dental staff.¹ The dental team is afflicted mainly with contact dermatitis (on the hands) and respiratory diseases.

The sensibilization of the dental staff begins still in the dental school. It is a well-known fact that the poly-allergy is the new cancer, so the atopic individuals and these with other allergies are expected to show higher sensitivity to our materials.² Another risk group consists of students with many and different restorations – they are already influenced by the studied materials. It is also anticipated that the longer exposure will lead to higher sensibilization.²

METHODS:

Three groups of dental students (in their first, third and fifth year) are the target of our research. They are taken an allergic anamnesis and full dental status; the materials of their restorations are also recorded. The potential allergy to dental materials is tested with the DMS-1000 Series (Dental Materials Staff) of Chemotechnique Diagnostics. The series consists of 10 allergens – it is applied to the students' backs with IQ Ultra patch and removed 48 hours later. Reading of the test is performed when the initial irritation of the skin is faded.

Table 1: Distribution of different allergies among students.

Allergy to	Number	%
Medicines	7	28
Foods	4	16
Polens	3	12
DPT	3	12
Others	7	28

Pic. 1: Positive reaction to TREGDMA.



Pic.2: Positive reaction to mercury and glutaraldehyde.



Table 2: 13 students (52%) have only composite restorations; 1 student is with healthy teeth.

Dental materials	Number	%
Resin composite	24	96
Amalgam	7	28
RC filling	6	24
Metal + acrylic	2	8
Metal-ceramic	1	4
Acrylic	2	8

RESULTS:

25 students were tested (5+5+15), 16 females and 9 males. One female removed the patch earlier due to strong reaction to the plaster. 14 of the students are atopic individuals and 17 have different allergies. 24 of them have resin composite restorations and only 7 – amalgam restorations. Only 5 students, but 20% of the tested, are allergic to different contents of the DMS-1000 Series – one is in his first year, two in the third and two in the fifth year. The student with positive reaction to 4 allergens had asthma as a child, and the student with positive reaction to TREGDMA has a temporary crown in the mouth. Two students are allergic to glutaraldehyde (used in disinfectants). Additionally, four of the students were tested for allergy to nickel – two of the reactions were positive.

CONCLUSIONS:

20% of our students are allergic to different dental materials – 80% of them are atopics and 80% have other allergies. The research will continue, because we need more participants and more time to register the development and the changes of these values through the years. Then we'll be able to say whether atopic and allergic individuals should study and practice dental medicine.

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