Allergy to dentures? Diagnostic approaches

A commentary by Dr. med. Felix Blankestein

"Allergy to dentures" is probably the most popular substitute referral diagnosis for patients whose complaints cannot be clinically identified by the dentist or at least cannot be assigned a clear, somatic clinical picture. This works quite well in university cities. One can almost always find a contact person (who is probably pitied by his colleagues) to deal with this classic situation: the patient reports severe discomfort - but his dentist sees nothing or, at best, a reddened mucosa. Such redness can be an expression of a contact allergy, but is far more frequently a symptom of many other pathologies: mechanical overload due to excess or negative pressure under a denture plate, microbial infection, pemphigoid diseases, radiation damage, adverse drug reactions, etc.

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As the prevalence of intraoral contact dermatitis in Germany is much lower than assumed by many homeopathic practitioners, "holistic" physicians and, of course, also by the patients suffering from vague complaints, the diagnosis should therefore not initially focus on an allergy. A serious holistic approach must consider all aspects of a possible denture intolerance. A straightforward approach is helpful here: allergy diagnostics should be employed in the sense of "exclusion diagnostics". Basically, one takes on the role of an examiner:

In the case of removable dentures, the focus is on mechanical problems, which are often triggered or exacerbated by parafunctions. The "habits" practiced with the aid of the tongue, lip and cheek muscles in particular can lead to a burning sensation of the covering mucous membrane, which is then misinterpreted as a symptom of an allergy. Even the simplest deficiencies of plate prostheses, such as insufficient congruence with the prosthesis bearing or a localized malocclusion, sometimes cause unpleasant paresthesia or persistent pressure points. Redness is also an accompanying symptom of candidiasis, which occurs almost regularly with dentures worn in a "24/7 mode".

And finally, it is important not to neglect the inner aversion to such a foreign body in the mouth, which is only too understandable from a human point of view and which those affected usually do not wish to acknowledge. Especially in Germany, the prefix "psy" is instinctively combined with "chiatry", which makes psychosomatic approaches to solving existing intolerance phenomena very difficult. Nobody wants to be considered insane - an allergy is far more socially acceptable.

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If, following thorough diagnostics, there are no indications of other nosologies, the search for potential allergens begins. The only task the dentist has in this case is to conscientiously collect the materials present in the patient's mouth and, ideally, their constituents. The actual testing is a medical task. And this is where the dilemma begins:

even today, there is still no allergy test that is both 100% sensitive as well as specific. Despite all its shortcomings, the epicutaneous test (ECT) performed by a dermatologist is still

considered to be the gold standard in the search for contact allergens. The sometimes still recommended "epimucosa test" is rejected scientifically because the mucosa reacts significantly less to contact allergens than the cutis. Accordingly, there is no valid interpretation scheme for this "test" in the patient's mouth. In contrast, the in-vitro test using a blood sample (lymphocyte transformation test, LTT for short) has the advantage that it cannot be manipulated. It can also be performed in the case of sunburns or other skin changes, but only provides an indication of possible sensitization, not of an allergic reaction that is already occurring.

In addition, various homeopathic medicine tests are offered, none of which have ever been tested for validity. However, their proponents have it easy: they always deliver a supposedly unambiguous test result. However, the colleagues who then fabricate a new denture on this basis are subject to the burden of warranty obligation...

Once an allergen has been identified, the search for "alternative" materials begins. These could be resins or alloys with a completely different chemical basis, but they could also be highly corrosion-resistant and elution-resistant materials from which the specific allergen is no longer released. A good example of this is the high-nickel alloy MP35N, which is used to manufacture numerous medical implants for orthopedics and vascular surgery.

And finally, a few words about "prophylactic" allergy testing prior to restorations with dentures: this idea, which is often referred to as prophetic testing, is not a good one, as the immune system does not tell us whether it intends to react in a pathologically excessive manner in the near future. In the worst case, such a test can lead to clinically silent (!) sensitization and then to a clinically manifest reaction upon second contact.

About the author

Dr. Blankenstein has been acting senior physician at the Charité - Universitätsmedizin Berlin in the Department of Dental Prosthetics, Geriatric Dentistry and Functional Dentistry since 1996. He is considered an expert in clinical prosthetics and supervises the denture intolerance consultancy at the Charité.

Interested?

Dr. Blankenstein gives lectures on the topic of denture intolerance within the context of the SSOP (Swiss School of Prosthetics). As described in this commentary, this topic poses a number of challenges. However, a systematic approach can genuinely help patients. As always, intensive coordination between the laboratory and the dental practice is important. Would you like to organize a lecture on this topic, then please contact us!