Talking with Patients

Featured Topic: Contact Allergy to Dental Fillings

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WHAT IS IT?

Contact allergy to dental fillings is a localized hypersensitivity reaction to various components of dental fillings. Tooth-colored (composite resin) fillings contain acrylate compounds, and silver-colored (amalgam) fillings contain silver, tin, mercury, and sometimes copper, all of which may initiate an allergic response.^{1,2} The word "mucosa" is used to describe the tissue lining the inside of the mouth. Contact allergy may result when acrylates, metal salts, or metals are released and absorbed by mucosa that is in close contact or proximity to the filling.^{3,4} The absorbed products increase the antigenicity of the mucosal lining cells, and these cells are then damaged or destroyed by the immune system response.^{3,4} Most of the time, the filling has been in contact with the affected mucosa over a period of years.⁴ The affected areas may include the side of the tongue, cheek, and/or lip tissue immediately adjacent to the filling that contains the allergen (Figure 1).

Your dentist may use the term "oral lichenoid reaction to a dental

filling" to describe the contact allergy that has been observed. Contact allergy varies in appearance based on the severity of the allergic response. Some individuals develop a thickening of the mucosa, which gives it a white, netlike appearance commonly described as "reticular" (Figure 1). More involved contact allergic areas appear red (erythematous), thin (atrophic), and are named "erosive." The most severe contact allergic response, referred to as "ulcerative," results in a break in the mucosal lining that exposes underlying tissue.4

HOW IS IT DIAGNOSED AND TREATED?

Your dentist or hygienist may notice the development of a suspicious (reticular or erosive) area during a routine dental exam or cleaning. Alternatively, an ulcerative area may have begun to cause discomfort leading to your examination. Careful examination will identify if the changes in the mucosa are occurring symmetrically on both sides of your mouth, as this may represent other conditions not related to an allergic

response to a filling material. Contact allergies usually occur on one side only, unless there are fillings in close contact with the mucosa on both sides. Your dentist will also note whether you have tendencies to bite areas of your mucosa or have sharp, irritating edges on your teeth, fillings, or other restorations. These sources of irritation may initiate changes in the appearance of the mucosa that are not part of an allergic response. Careful charting of the location of the suspicious area, as well as the location of various fillings in your mouth, will be accomplished. If your dentist finds that the suspicious area is in close contact with a dental filling (Figures 2 and 3), then replacement of the filling will likely result in complete healing of the area, although this may take up to 12 months or longer.⁴

It may be necessary to temporarily apply medication designed to limit the allergic response while you are healing. Your dentist will select an inert type of filling material such as glass ionomer or porcelain to

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Figure 1. Localized white, netlike area on the side of the tongue. Photo courtesy of Dr. Ricardo Padilla.



Figure 2. The bottom right first molar has a large metallic filling just adjacent to the tongue (arrow). Photo courtesy of Dr. Ricardo Padilla.



CONCLUSIONS

Dental biomaterials, such as fillings, rarely cause adverse reactions.² Mucosa that is in direct contact with dental fillings may develop a contact allergy, also referred to as "allergic contact mucositis," as a result of long-term exposure to various components in the filling material. The affected mucosal area will likely heal if the adjacent dental filling is replaced with an inert filling material. Periodic examinations will allow your dental health care providers to monitor and recommend appropriate treatment for any areas of concern.

DISCLOSURE

The authors do not have any financial interest in manufacturers whose materials are discussed in this article.



Figure 3. Dental examination reveals changes in the mucosa on the side of the tongue immediately adjacent to the dental filling (circle). Photo courtesy of Dr. Ricardo Padilla.

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