

Gold Remains an Important Allergen

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“Don’t gain the world and lose your soul; wisdom is better than silver or gold.”

I agree with the Reggae master, Bob Marley, and would add that wisdom about gold allergy is critical for the contact dermatitis expert. It has been a quarter century since gold was recognized as a common allergen.¹ Before that, it was thought of as a rare cause of allergic contact dermatitis (ACD). Fisher,² the ACD master but not a big fan of Reggae, stated that “the relative insolubility of gold in skin secretions probably accounts for the paucity of cases...”

From the late 1980s forward, a virtual explosion of cases of gold allergy has been reported. As is noted in the article by Chen and Lampel³ in this issue, prevalence of gold allergy in large series has been noted to be at least 8% or 9% and often much greater. And yet, some seemingly competent patch testers eschew the routine testing for gold allergy. Let’s examine some of the concerns and controversies surrounding this valuable allergen.

“Truth, like gold, is to be obtained not by its growth but by washing away from it all that is not gold.”—Leo Tolstoy

Why are there many positive patch tests to gold without relevance to the presenting dermatitis?

One of the conundrums cited by those who would routinely exclude gold from patch testing is that often positive gold patch tests (PTs) are not obviously related to the presenting dermatitis. Although this certainly seems to be the case at times, it is not unusual for me to discuss a positive gold PT with a patient only to find that she had stopped wearing gold in the past after recognizing gold jewelry as a cause of dermatitis. Past relevance may not be that exciting, but I would suggest examining another commonly positive allergen, neomycin, for past and current relevance. The latest North American Contact Dermatitis Group report shows that only 16% of neomycin-positive PTs are of definite or probable relevance, as opposed to 60% of past relevance.⁴ In the same report,

chromium was listed as of definite relevance in 0.0% and of probable relevance in 19%. Cobalt definite or probable relevance was 11%. If we can accept these low relevance numbers for other allergens, why not for gold?

And while we are on the topic of relevance, a clear connection between eyelid dermatitis and gold allergy has been seen in a variety of reports.^{1,5} This is not, at least to me, intuitively obvious. So perhaps there are other situations of relevance to gold allergy that are not yet widely appreciated? We will only learn what these are if we continue to PT with gold.

“It is very hard to find something if you are not looking for it.”—Joe Fowler

Why do some positive patch tests to gold persist for weeks or months?

“Make new friends but keep the old; those are silver, these are gold.”—Joseph Parry

There’s no question that sometimes gold PTs will remain visible for weeks or months. I have never seen an explanation for this, so I will speculate. In the Dark Ages of dermatology, when the author was in training, the local histopathologists used a colloidal gold stain for identifying Langerhans cells (LCs) in the skin.⁶ Now we know more about LCs and other antigen-presenting cells and have many better ways to find those cells in tissue specimens. But if gold was able to be grabbed by LCs in preference to other cells 50 years ago, it is my belief that modern LCs will be just as snappy at picking up the metal, especially when it is available as a soluble salt. And once they’ve grabbed it, maybe the miserly little cells don’t want to let it go! So they remain stimulated and continue to bring in inflammatory cells for quite a while.

But regardless of the mechanism, why does it matter? Yes, maybe a patient with a persistent PT site may call back to the clinic and the doctor may actually have to speak with her. If only every patient call were so easy! And I prefer to use the situation to reinforce the concept that, even with careful allergen avoidance, it may take weeks or months for ACD to resolve.

So, in conclusion, I continue to believe that patch testing with gold is valuable and necessary. I think failure to test with gold because sometimes we will see a persistent positive PT or because we can’t always explain the relevance is an untenable position for a serious patch tester. I do not feel lost if I find a positive PT that is inexplicable.

“All that is gold does not glitter, not all those who wander are lost...”—JRR Tolkien

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