

Reply to a Letter to Editor “Nickel Allergy, Amplatzer Atrial Septal Occluder Device, and the Risk of Kounis Syndrome”

We appreciate the letter by Dr. Kounis that expands our discussion of the literature on hypersensitivity reactions to various metals. As our patient had no electrocardiographic evidence of ischemia, no biomarker evidence of myocardial necrosis, normal stress echocardiography, and normal coronary arteries by selective angiography¹, the patient's chest pain syndrome is not suggestive of the Kounis hypersensitivity coronary syndrome.² However, we do agree that the patient had a very strong allergic reaction to the implant. Many patients with a positive nickel skin patch test do not exhibit allergic symptoms to internal implants. Further diagnostic testing strategies are needed to predict which patients will react to metallic internal implants.

We do agree that some patients undergoing atrial septal defect closure with the Amplatzer device (AGA Medical, Plymouth, MN) may have systemic complaints of chest discomfort, palpitations, and migraine headache, possibly related to a hypersensitivity reaction to nickel. Whether the Gore Helex device (W.L. Gore & Assoc., Inc., Flagstaff, AZ) also results in measurable increases in serum nickel levels and is associated with a hypersensitivity response in some patients awaits further investigation. We have started a trial comparing serum nickel levels and hypersensitivity

symptoms in patients treated with the Amplatzer vs Helex device for atrial septal closure.

While Dr. Kounis promotes the safety of cobalt-chromium stents (Xience, Abbott Laboratories, Abbott Park, IL), there are reports of allergic responses to those metals as well. In the most recent report from the North American Contact Dermatitis group, nickel sulphate was the most frequent allergen on patch testing (19%); however, cobalt was positive in 8.4% of patients, and chrome was positive in 4.8%.³ Based on these data, allergic reaction to a variety of metals occurs at relatively high frequency.

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References

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