

Letters

COMMENT & RESPONSE

Dual Allergy to Penicillin and Cefazolin—Does Anaphylaxis Matter?

To the Editor We read with great interest the article by Sousa-Pinto and colleagues¹ on cefazolin and penicillin allergies. This is an important topic on administration of preferred antibiotics for prophylaxis of surgical site infection (SSI). The authors reported a meta-analytical frequency of 0.7% for patients with penicillin allergy history and allergy to cefazolin (dual allergy).¹ They suggested that most patients with a history of penicillin allergy may safely receive cefazolin, with the exception of patients with confirmed penicillin allergy.¹ However, given the low frequency of penicillin-cefazolin dual allergy, determined cefazolin should be administered regardless of penicillin allergy history.¹

We caution this suggestion because of the risk for severe anaphylaxis. Diagnosis of penicillin allergy is known to be inaccurate.² Indeed, dual allergy to cefazolin in patients with a history of penicillin allergy occurred at similar rates in patients with unconfirmed penicillin allergy (0.6%) and no penicillin allergy (0.6%); with confirmed penicillin allergy, the frequency increased 5-fold (3.0%).¹

The question on day of surgery remains: how should we approach patients with reported penicillin allergy? Any clinician who has dealt with severe intraoperative anaphylactic reactions knows the difficulties: mean arterial pressure less than 20 mm Hg, heart rate of more than 150 beats per minute, pulses nonpalpable, peak airway pressures more than 60 cm H₂O, and difficulty pushing even 100 mL of tidal volume into patients' lungs. No one wants to encounter this again.

It is important to assess risks of increased incidence of SSI when secondary antibiotics are given with increased incidence of severe anaphylaxis before cefazolin administration. SSI occurs in 2% to 4% of patients undergoing inpatient surgical procedures.³ Patients with reported penicillin allergy have 50% increased odds of developing SSI after receiving second-line antibiotics.⁴ The incidence of anaphylaxis to cephalosporins is 0.6 to 6.8 per 100 000 exposures.⁵ Therefore, if 1 in every 25 to 50 cefazolin exposures resulted in SSI, and ana-

phylaxis occurred every 1 in 15 000 to 170 000 cefazolin exposures, then the risk for 1 anaphylaxis is every 300 to 6800 SSIs. Data on true prevalence of cefazolin anaphylaxis would help in decision-making to avoid devastating outcomes. Both these complications are important and could affect hospital quality measures.

Until more data are available, detailed history of allergies remains the primary tool for clinical decision-making. We recommend not to give cefazolin to patients with documented penicillin allergy and/or those with reported anaphylaxis symptoms.

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