CORRESPONDENCE

Commentary on "Reported Penicillin Allergy Affects the Length of Hospital Stay in Patients with Erysipelas"

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Dear Editor,

We read with great interest the study by Shahmoradi et al. (1) published recently in your journal, which investigated the impact of anamnestic penicillin allergy on the length of hospital stay (LOS) in patients with erysipelas. We commend the authors for their insights; however, there are several methodological and statistical reporting issues regarding the interpretation of these findings that warrant further constructive discussion.

First, the comparison group consisted of the 103 most recent patients without an anamnestic penicillin allergy, whereas the allergy group was selected from a broad 14-year period (2010–2024) (1). This sampling strategy may introduce calendar–time bias. Adjustment or matching by admission year, or a sensitivity analysis stratified by treatment era, would help determine whether the observed LOS difference is attributable to the allergy label rather than secular changes in discharge practice or antimicrobial stewardship (2).

Second, LOS is typically right-skewed and susceptible to outliers, as also suggested by the boxplot in Figure 2 of the original article (1). Therefore, the robustness of the reported *p*-value and regression coefficient would be better supported by additional analyses, such as Welch *t*-test or the Mann–Whitney *U* test, log-transformed or robust regression models and sensitivity analyses excluding extreme LOS values. In addition, it would be helpful to clarify whether a standard Student *t*-test or Welch *t*-test was used, given the unequal sample sizes and potential unequal variances between the 2 groups.

Third, while the authors adjusted for the Charlson Comorbidity Index (CCI) and C-reactive protein (CRP), the 2 cohorts were not fully exchangeable at baseline. The nonallergy group was older and had higher CRP and CCI values, whereas the allergy group still showed longer LOS (1). This counterintuitive pattern strengthens the clinical interest of the finding, but the causal pathway remains insufficiently clarified. The authors suggest that allergy labels may lead to alternative antibiotic use and thereby prolonged LOS; however, LOS did not differ significantly between patients treated with benzylpenicillin and those treated with clindamycin (1). Clarifying whether antibiotic choice mediates, modifies, or merely accompanies the association between the allergy label and LOS – potentially supported by propensity-score matching – would strengthen the mechanistic interpretation.

These clarifications would not weaken the clinical relevance of penicillin allergy delabeling (3); rather, they would help identify which components – true antibiotic effectiveness, allergy-label documentation, consultation processes or discharge practices – most strongly contribute to delayed discharge.

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