Validation of the first risk stratification based penicillin delabeling program outside an allergy clinic in Norway

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June 20, 2023

Abstract

**Background:** Penicillin allergy is self-reported by 3-10% of patients admitted to hospital. The label is wrong in 90% of the cases and has severe health implications. Penicillin-delabeling can reverse the negative effects of the label, and pathways adapted to local practice are needed. No tools are available in Norway for penicillin delabeling outside an allergy clinic. **Methods:** An interdisciplinary taskforce created a penicillin allergy delabeling program (PAD) adapted to the Norwegian health care system. This was validated in a prospective, single-centre study. Very low-risk and low-risk patients underwent a direct oral penicillin challenge and high-risk patients were referred for allergologic evaluation. **Results:** 149 patients declaring penicillin allergy were included. Seventy-four (50%) were very-low- and low-risk patients suitable for a direct oral penicillin challenge resulting in only one mild reaction. 60 high-risk patients were eligible for an oral penicillin challenge after allergologic evaluation, three patients reacted non-severely. **Conclusion:** We have demonstrated excellent repeatability and feasibility of the first PAD applicable in a hospital setting outside an allergy clinic in Norway. Our data suggests this is safe and beneficial, with 49% patients delabeled through a direct oral penicillin challenge, performed without any serious adverse events, and an overall 87% delabeling rate.

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