Author’s response to reviews

Title: A seven-year retrospective analysis of patch test data in a cohort of patients with contact dermatitis in Sri Lanka

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Author’s response to reviews:

Thank you for the reviews

Stephan Forchhammer (Reviewer 1): The authors present a seven-year retrospective analysis of patch test data in a cohort of patients with contact dermatitis in Sri Lanka. I think it is valuable information to set local standards.

But nevertheless, I would like to see a more detailed description of the methods used, in particular, methodology of the patch testing used has not been described.

Was patch testing applied for 24 or 48 hours? At which timepoint was the readout?

The procedure is an epicutaneous diagnostic provocation test using standard haptens. Patch testing haptens are placed onto the patient’s skin and kept for 48 hours and read after 48 hours and 96 hours.

Have there been differences in the concentration of tested allergens?

Commercially available chemotechnique diagnostics patch testing kit with standard concentrations were used for patch testing.
Could a difference in time of application or concentration of the tested compounds explain a difference in positive results?

The time of application and the concentrations were not changed during the study period. All 3 series were done using same methodology and kept attached to the patient’s body for similar duration and the concentration of each allergen was same in all 3 series.

There is no comment on possible false positive results, have you assessed angry back reaction or irritant reactions?

Irritant contact dermatitis was detected in several patients during patch testing as having positive results on first reading but being negative on second reading. They were considered as negative cases for patch testing as our intension was to detect allergic contact dermatitis.

Anna Caroline Pilz (Reviewer 2):

1. Standardized patch test series like the European baseline series frequently undergo changes (e.g. change of concentration of methylchloroisothiazolinone/methylisothiazolinon in 2014 or the addition of the textile dye mix in 2015). Please provide -as supplementary information- a table displaying the three series that you used. They should ideally include the substances, their concentrations, their dose per unit and their vehicle.

I have added this as a supplementary

2. Since you did not perform patch tests on randomly selected people of the general population but on patients with contact dermatitis, please replace the term "population" (p.2, l.56) with e.g. "study population" or "tested patients".

I changed this

3. Please insert a citation for the paragraph about economic costs of contact dermatitis in the USA (p.3, ll.34-39).

added
4. When reporting that ICBS had the highest positivity rate, please mention that ICBS includes the highest number of tested substances.

5. Are there any determinable reasons for the reduced overall positivity rates (and reduced PPD and MBT positivity rates) over time?

Were the series (e.g. concentrations of substances) modified during the seven years? Were test indications different (e.g. more tested patients in recent years/ not as strictly selected as before)?

The concentration of the substances and the indications were not changed during the study period. We were unable to find any reason for this reduced overall positivity rates.

6. In Table 1 only the five most common allergens of the SS and the EBS and not the ICBS are depicted. Please correct your statement accordingly on p.6, l.51.

Corrected

7. Please remove the word "irritant" (p.7; l. 22). A correctly applied and interpreted positive patch test reaction always is an allergic, not irritant, reaction.

Removed

8. Please revise carefully the information taken from the cited articles.

p.7, l.42: The percentages are disaccording with the percentages reported in the abstract.

Corrected

9. Is there a particular reason for citation number 8? No additional information is provided.

This is another study in which Potassium dichromate was the second most allergen reported.
10. Would it be possible to cite more recent papers on the discussed matters?
I have added some new citations

11. Please revise the following sentences.

p.3, ll.1-3
p.4, ll.5-8
p.8, ll.48-53

lines were revised

12. Please correct the following spelling/grammar/formal mistakes.

p.2, l.3/p.3, l.13: "Background" (one word)
p.3, l.22: "Contact allergies are" (instead of "allergy")
p.3, l.39: insert "to" between "estimated" and "be"
p.3, l.57: remove "also"
p.4, l.5: "get" instead of "gets"
p.5, l.8: "difficulty"
p.5, l.16: remove blank space between "series" and period

p.5, l.26: "collected"

p.2/6/7/8: Please pay attention to small and capital letters (consistent style). If not located at the beginning of a sentence, the mentioned allergens e.g. "nickel sulfate" or "potassium dichromate" do not need to be capitalized.

p.7, l.43: insert blank space (". In")
p.7, l.45: remove blank space between opening parenthesis and "using"
p.8, l.16: comma should be superscripted

p.12, l.15: replace bullet point with symbol used in table

corrected