

Chemical Peeling for Nail Disorders: Author Response to the Published Comment

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Sir,

We read with interest the comments^[1] on our earlier article on chemical peeling of nails.^[2] We are indeed glad and thank the authors for taking the pain to analyze the interpretations of our study. We would like to put forward our views for the sake of clarity and benefit of the readers.

Just as there are multiple routes to the same destination, it is an accepted fact that various study designs can be used to evaluate given aims and objectives. Though chemical peels have been in existence for a long time now, their evaluation in nail disorders is relatively new. Following the pioneering work by Banga and Patel^[3] (2014), we decided to follow the scientific way of building up on the meagre evidence available^[2] (2017). We would emphasize again that not much is known about the mechanism of action in nail because obvious parallels with skin cannot be drawn.

As Banga and Patel had chosen “glycolic acid” for “nail rejuvenation,” we planned to objectivize the selection of patient population, methodology as well as evaluation of efficacy. This is the scientific method, where one study builds on the evidence from previous works available.

The answers to the author queries, pointwise, are as follows:

1. Doubts have been raised regarding our sample size. We chose to do an intraindividual right–left comparison with peel similar to the one evaluated in previous study (70% glycolic and 8% phenol combination peel).^[2] The comparison being first of its kind, qualifies to be a pilot work, hence a convenient sample size was chosen. It is unfair to compare the 31 patients studied with a single agent versus 15 patients where two agents were used under a much more rigorous study protocol.

2. Our study analyzed the number of nails and reported the effects with clarity, courtesy the more rigorous protocol we followed. This increases transparency and reproducibility of results as is evident in our article.
3. Banga and Patel included “rough, dull, discolored nails because of chemical abuse” and “pitted nail, nail ridges because of nutritional deficiencies and ageing” as an inclusion criteria,^[3] which certainly cannot be equated with trachyonychia as suggested by Sonthalia and Singh.^[1] Hence, the submission that “dry rough nail is the most consensual and recently accepted general term for trachyonychia” is erroneous and likely to be misquoted in future works.
4. In addition, the pioneering work included “hyperkeratotic nail plates due to onychomycosis, lichen planus” as another inclusion criterion, whereas we deliberately excluded thickened nails as the depth of penetration of peels is conjectural and unpredictable. We focused only on the surface changes where we could be assured of a predictable penetration. We also excluded infective conditions as is the standard practice with skin peels.
5. We put in our best efforts to produce a “well-controlled and designed study” considering the background data and knowledge available. The authors in their comment have questioned the lack of the three tenets of good study design, but at the same time, what needs to be taken into account is that better studies are built on previous data, which are grossly lacking for this particular interventional strategy. We hope that our

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work can be the basis for further studies by committed workers, involving more number of patients.

6. Our study evaluates each nail in detail in an objective as well as a subjective manner, which has never been documented in literature. The clinical images were screened by two different dermatologists and scored independently. One of the scoring methods used, that is, the Nail Surface Abnormality Index (NSI), was devised by us in view of a lack of previous data and scoring systems. This system was validated within the department at our institution where the study was carried out. In addition, we used two other scoring methods. The patient's subjective perception about the degree of nail surface abnormality was assessed with the help of visual analog scale. The physician's perception of improvement was graded by Physician's Global Assessment scores. Thus, NSI was not the only score we used and it will take some more work by interested authors to validate it further. Reporting gross improvement without studying individual nails can be deceptive. As more data accumulate, a larger scale validation revealing the quality, practicability, and precision would be possible.
7. The authors suggested inclusion of a single diagnosis. That was precisely the approach we followed where we evaluated the improvement in surface irregularities of the nail (irrespective of the etiology). It was because we expect the peels to improve this aspect only. We cannot expect the etiology of the nail abnormality to improve by using peels as they can only have a cosmetic effect.
8. Comparing nail peels with other treatment modalities, such as injections, would not have served the purpose of our study. Besides, none of the other treatment modalities have extensive literature supporting their use in nail disorders. So adding them would only dilute our results.
9. The statistical parameters reported were the mean and standard deviation for the NSI. The results were compared with the help of chi-square test and paired *t*-test using the software Statistical Package for the Social Sciences (SPSS) version 17 (SPSS Inc., Chicago, IL, USA). Level of significance was assumed at the standard level of 95%, and $P < 0.05$ was taken as significant, which is the standard practice in most studies. At the same time, Figure 2 in our article depicts the effect of the intervention undertaken in the study population without doubt.
10. In the planning phase of our study,^[2] we also considered the use of onychoscopy but decided against it, and we are glad that Sonthalia and Singh^[1] have raised this concern. The nail surface changes studied by us were easily visible to the naked eye, and the results expected from chemical peeling were also significantly visible. Thus, adding a tool such as onychoscopy is a

good suggestion had our goal been to study deeper changes. Even with onychoscopy, a scoring tool would be needed by future researchers to report results in an objective manner.

11. Different types of chemical peels are classified with respect to their level of skin penetration where they have been widely used. The use of chemical peels for nails is a novel approach.^[2-4] Hence, till date no standard protocol or specific peeling agent for the same has been validated. It is understandable that although chemical peels are being evaluated for their worth in nail disorders, and as no preexisting classification of peels for nails is available, one would use the classification as used for skin. The mechanism has been postulated though not proven. Future histopathology-based studies can shed more light on this aspect as aptly suggested by Daulatabad *et al.*^[2]
12. Our study focused on the role of nail peeling in superficial nail abnormalities. We designed our study and meaningfully restricted it to patients with superficial nail abnormalities without any systemic disease state. The patients were not on any systemic medications, including multivitamins or intramatrix injections, neither were they on any topical therapy apart from bland emollients. This helped us to remove confounding factors from our work.

We have aptly acknowledged the need for future studies with higher sample size to further solidify the evidence in this regard.^[2,4] We are indeed happy that this study has already garnered a lot of interest in the topic as is evident by the elaborate comments. We believe this study has significantly added to the limited evidence in this regard and it would be an impetus to conduct larger studies to build up on this scarce evidence. We once again invite readers to take up larger studies with larger samples for the benefit of scientific growth and posterity.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Sonthalia S, Singh R. Chemical peeling for nail disorders: need for a systematic approach. *J Cutan Aesthet Surg* 2018;11:161-3.
2. Daulatabad D, Nanda S, Grover C. Intra-individual right-left comparative study of medium depth peels in superficial nail abnormalities. *J Cutan Aesthet Surg* 2017;10:28-32.
3. Banga G, Patel K. Glycolic acid peels for nail rejuvenation. *J Cutan Aesthet Surg* 2014;7:198-201.
4. Grover C. Role of chemical peeling in nail disorders. *J Cutan Aesthet Surg* 2014;7:201-2.