

Allergic contact dermatitis caused by topical ophthalmic medications: Keep an eye on it!

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Dear editor,

In their article entitled "allergic contact dermatitis from topical ophthalmic medications: keep an eye on it!",¹ the authors presented their surprising, and rather significant clinical findings that active ingredients in topical ophthalmic preparations may be more allergenic than the preservatives, a concept which has long been held by some ophthalmologists but hitherto lacked proof.

In the results section, the authors listed those sensitizing agents in a descending order of frequency based upon the absolute number of positive results of patch-

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testing from each agent. The authors also listed their results in table 1, however a closer look at table 1 shows that the authors also estimated the crude rates (the percentage of positive patch tests from the total number of tests performed for each ingredient). Interpreting the results from a *percentage perspective* would not essentially change the overall outcome of the study that "the most common *..sensitizing agents..* being antibiotics and corticosteroids". Indeed, active ingredients would still predominate, and non-active ingredients or preservatives would remain on the bottom of the list, but this alternative reading would lead to an entirely different order of results, which arguably may be more appropriate. Although tobramycin would still be on the top rank with 13.6%, it would be followed by gentamycin (3.6%) rather than neomycin, which in turn would be followed by polymixin B sulfate (2.1%), chloramphenicol (1.2%), tetracaine (0.9%), dexamethasone (0.8%), prednisolone pivalate (0.4%), and hydrocortisone acetate (0.3%).

Admittedly, the problem with calculating crude rates is that confounding factors may play a role in skewing the results, however in the case of allergic contact dermatitis resulting from topical ocular medications, there are no confounding factors to consider, at least ones that I know of. Moreover, the number of patch tests performed per ingredient varied from as high as 15738 to as low as 12. Whether this huge variability in the number of patch tests performed represents hypothetical presuppositions by the authors, the lack of availability of certain patch tests or their substantial cost is not clear in the text. Nevertheless, using absolute numbers would naturally skew the results of positive patch testing towards ingredients which were more frequently examined.

Another issue of concern in the paper is that the authors correctly assessed the crude proportions only when the number of patch tests performed exceeded a 100, however some of the agents which were rarely tested yielded a substantially high number of positive results, like atropine (5/39), phenylephrine (7/55). These 2

agents in particular are commonly used in Ophthalmology clinics, and one can not help but wonder why were so few patch tests performed for ingredients that are in fact mainstream essentials ?.

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