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Comments on Vasileiadou et al

To the Editor,

It was a pleasure reading the article: "Eating fish and farm life reduce allergic rhinitis at the age of twelve" by Vasileiadou et al¹ in your journal. I particularly would emphasize the conclusion of lower incidence of allergic rhinitis in children who ate fish at the age of 12 months. This is in corroboration with other similar literature published on the incidence of food allergies in children in the developed world where there is a higher rate comparably than developing countries. One of the main reasons for this is the exposure to various allergens and particles in the environment in developing countries that reflect in earlier maturity of the immune system. Developed countries are also now following advice from allergy research that exposing children to potential allergens from a young age can in fact be beneficial for their immune system and reducing the incidence of lifelong allergies.²

However, I would like to question why the authors did not mention other variables in the environment that can increase the incidence of allergic rhinitis. For example, allergic rhinitis is on a similar spectrum to atopic conditions like eczema and asthma. Although farm living and exposure to animals is likely to flare up a bout of allergic rhinitis in a child who has atopy, it is likely that the absence of this may indicate low threshold for developing allergies to farm animals in that child regardless. As Wang³ mentions, a genetic background measured through family history of atopic disease "is the strongest risk factor the development of allergic symptoms, irrespective of the varying prevalence and environmental risk factors in different societies." Similarly greater concordances of allergy in monozygotic twins compared to dizygotic twins illustrate this strong genetic component. Therefore, in Vasileiadou et al's study, whilst parental incidence of atopic illness was measured through questionnaires, a more appropriate study design may have yielded this important confounder. For example, instead of adopting a randomly selected prospective longitudinal cohort study, it may have been an option to undertake a 2-arm prospective cohort study with one group with strong family history of atopy and the other with low or absent family history of atopy. This would have the benefit of assessing whether family history was a strong player irrespective of whether the child was exposed to fish or farm animals at a young age.

Another viewpoint I wanted to highlight was the method of introducing fish at a young age and its correlation with allergic rhinitis. Fish anaphylaxis allergies are common, and if we follow similar trends of early exposure to reduce incidence, then this would help reduce the incidence of anaphylaxis. However, its relation in reducing the incidence of allergic rhinitis seems quite surprising. Tamay et al⁴ outline that in fact exposure to a variety of foods including cereals, rice, pasta and chocolates may have a beneficial effect on reducing the incidence of rhino conjunctivitis. This suggests that it may be the collective addition of foods that are relevant instead of a particular type of food such as fish.

On the whole, I found this a hugely relevant article to understanding allergies in children in a more comprehensive manner, especially as it was conducted in Sweden where there is similar incidence of allergies with the Western world. However, it would be useful to gain an increased awareness of the factors I have posed.

Look forward to hearing you reply,

Best wishes,

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REFERENCES

1. Vasileiadou S, Wennergren G, Strömberg Celind F, Åberg N, Pettersson R, Alm B, et al. Eating fish and farm life reduce allergic rhinitis at the age of twelve. *Pediatric Allergy and Immunology*. 2018;29(3):283-289.
2. Chin B, Chan ES, Goldman RD. Early exposure to food and food allergy in children. *Can Fam Physician*. 2014;60:338-339.
3. Wang D-Y. Risk factors of allergic rhinitis: genetic or environmental? *Ther Clin Risk Manag*. 2005;1:115-123.
4. Tamay Z, Akcay A, Ergin A, Güler N. Dietary habits and prevalence of allergic rhinitis in 6 to 7-year-old schoolchildren in Turkey. *Allergol Int*. 2014;63:553-562.