

Anaphylaxis to galacto-oligosaccharides – an evaluation in an atopic population in Singapore

J. Y. Soh, C. H. Huang, W. C. Chiang, G. V. Llanora, A. J. Lee, W. Loh, Y. L. C. Chin, V. Y. J. Tay, Y. H. Chan, D. Dianne, B. W. Lee

Abstract

Anaphylaxis to galacto-oligosaccharides (GOS), a prebiotic, has been described in atopic patients following its supplementation in commercial milk formula in South-East Asia. The epidemiology of this usual allergy to a carbohydrate is unknown. This study evaluated the prevalence of allergy to two formulations of commercial GOS, Vivinal™ GOS (vGOS) and Oligomate™, in an atopic cohort. Atopic subjects ($n = 487$) from two specialist allergy clinics were surveyed via structured questionnaire and underwent skin prick tests to GOS. Subjects with positive skin prick tests to GOS ($n = 30$, 6.2%) underwent basophil activation tests, and a subset ($n = 13$) underwent oral challenge tests to both formulations of GOS. Six subjects had positive challenges to vGOS; and none to Oligomate. By extrapolating the BAT and oral challenge results, the prevalence of allergy to vGOS is estimated at up to 3.5% (95% CI 2.2–5.5%) of our atopic population. Our findings show that GOS allergy may be common amongst atopics in Singapore.

Link: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/all.12645>