



Does Food Allergy Require Any Change in Measles-Mumps-Rubella Vaccination?: Correspondence

To the Editor: We read the publication on “Does food allergy require any change in measles-mumps-rubella vaccination?” published in IJP with a great interest. We would like to share ideas and experience on the present report. Elitok et al. concluded that “Food allergy does not necessitate modification of routine vaccination [1].” We would like to share ideas and experience on this observation. In fact, adverse effect is observable for any vaccination. In our setting, Thailand, a tropical country in Indochina, MMR vaccination is generally used and the vaccination is usually performed in primary health care center with limited resource. According to the national surveillance record during a 10-y period (2010 – 2019), there is no report of MMR anaphylaxis. This can confirm that MMR vaccine is safe. Indeed, advanced biotechnology is already used for vaccine manufacturing and there is usually no chance of food related allergen contamination. There is no identifiable amount of food allergen in the MMR vaccine that is presently used [2]. The recent previous studies among children with confirmed diagnosis of egg allergy show that MMR vaccine is safe [3, 4]. Nevertheless, there is an interesting recent report from Brazil on MMR anaphylaxis [5]. According to this study, expected rate of MMR anaphylaxis exceeded 1/100,000 doses administered and there was no association with family food allergy [5]. But there was an observation on the possible association with cow's milk protein allergy [5].

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Authors' Reply

To the Editor: We thank Joob and Wiwanitkit for comments on our recent article published in IJP [1]. In our study, three cases developed minor allergic reactions after MMR vaccination: urticaria in one case with egg and milk allergy; macular rash was seen in one case with egg and milk allergy and in another case with egg allergy, macular rash was detected. The case who developed urticaria had a history of anaphylaxis after intake of milk products. In this case, cow's milk specific IgE and milk Prick test were positive [1].

In a case-controlled study in Brazil, it was emphasized that the association of anaphylaxis development with cow's milk protein allergy (CMPA) was statistically significant after MMR vaccine [2]. They recommended that the manufacturer should specify the product's components in the package insert, furthermore children with a history of CMPA should not be vaccinated with this vaccine [2]. Most recently, Piñones et al. reported that 9 cases with acute-onset allergic reaction detected after MMR vaccine, all cases had been diagnosed IgE-mediated cow's milk allergy in their first years of life [3]. In these studies, a high rate of allergic reactions was reported after vaccination of MMR by a similar manufacturer [2, 3]. CMPA had been in two cases in our study; this data supports the relationship between CMPA and allergic reactions after MMR vaccine [1]. However, the low rate of allergic reactions after MMR vaccine makes it difficult to determine the cause of allergy reactions.

It has been reported that children who developed anaphylaxis after administration of MMR vaccine were hypersensitive to gelatin and were positive for gelatin-specific IgE [4]. Other studies reported a few cases found positive for both gelatin- and milk- specific IgE and cross-reactivity between

the two biomarkers [5, 6]. de Silva et al. evaluated allergic reaction after immunization in cases with cow's milk or beef allergy and it was reported that allergic reaction developed in 11 patients after administration of measles-containing vaccines. They speculated that gelatin did not appear to play a major role, but bovine serum albumin was reported to be a possible cause of allergic reaction to the vaccine [7].

As a result, we would like to emphasize that gelatin-specific IgE status should be investigated in infants with cow's milk allergy associated with allergic side-effects after MMR vaccine.

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