

Correspondence

Differences in treatment of food challenge-induced reactions reflect physicians' protocols more than reaction severity

To the Editor:

We read with interest the article by Järvinen et al.¹ regarding rescue medication use in food challenges. We have reviewed our own clinical data in the only unit in Ireland performing food challenges. This shows a significantly lower rate of epinephrine use, which we suspect reflects differences in challenge procedures and physician practice in North America and Europe.

In the absence of data to show that food allergies are more severe in one country than another, we can assume that the patient groups are broadly similar, despite Mt Sinai's national and international referral pattern. Patients challenged in the Cork Allergy service are referred from all over Ireland, and no child was referred from Cork for challenge elsewhere. Our patient selection criteria for challenge are actually less strict than in the report by Järvinen et al.,¹ where a prechallenge estimate was made of a <50% likelihood of failing the challenge. In our series, 15% of children had skin prick test wheal sizes of ≥ 7 mm (Solu-prick; ALK-Abelló, Hungerford, UK), so positive challenges were probably more likely in Cork than New York.

From 2006-2009, a total of 439 challenges were performed in Cork. Ninety percent were open food challenges (OFC). Forty-nine percent were positive (peanut, 118; straight egg, 108; baked egg, 86; milk, 64; other, 63) compared with 436 (34%) of 1273 positive in New York ($P < .001$). Intramuscular epinephrine was given in just 8 cases in Cork (1.8% of total challenges and 3.7% of positive challenges), compared with 3.9% of total ($P = .045$) and 11% of positive challenges ($P = .002$) in New York.

The same group had previously reported severe reactions to the first dose (100 mg) in up to 25% of milk challenges.² Their current starting dose of 1% of "8-10g dry weight" (80-100 mg) might still be too high: lower thresholds have been identified for egg, milk, and peanut.³ Our first dose in an OFC is rubbing the native food on the lower lip, which probably represents a much lower, but admittedly unquantified, first dose.

Peanut accounted for 55% of positive challenges in Cork, compared with 20% in New York, which could have been expected to elicit more severe reactions and more epinephrine use in Cork, but our data, as shown, do not bear this out.

In New York, "medications were administered immediately on detection of an allergic reaction."¹ In our view this is too early and

does not allow some reactions to recede without medication. Sixty-two (28%) of 215 of positive challenges in Cork received no medication at all. Nine patients who wheezed and/or had extensive flushing were successfully treated, under observation, by using antihistamines, corticosteroids, and nebulized albuterol, without recourse to IM epinephrine.

We still advise parents to give epinephrine IM for allergic reactions in the community after antihistamines if the reaction involves more than minor cutaneous symptoms or immediately if anaphylaxis has occurred before. We are not advocating never giving epinephrine during food challenges, but we want to highlight that in a controlled medical environment, it may be needed even less frequently than a rate of 11%.¹ Staff confidence and experience are key performance aspects of a challenge for families. Early use of epinephrine in a challenge is likely to affect the way families behave in the community when treating their child themselves and also when discussing child care with schools and other care givers.

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