Frey’s syndrome: differential diagnosis of food allergy

A 4-year-old boy with a history of asthma was referred for evaluation of possible food allergy. He was born at term and the delivery was complicated by failure to progress, requiring the use of forceps. He had a history of isolated left facial flushing appearing during meals, extending from the corner of the cheek to the temple and tragus, beginning at 4 months of age, at weaning. The child had been referred to an allergist, and skin-prick tests with a battery of common food allergens were negative. Symptoms were triggered by several sweet foods (fruits, candies) a few seconds after mastication and disappeared spontaneously within a few minutes. The diagnosis was made clinically on the reported symptoms with, notably, unilaterality, chronology, absence of urticarial wheals and of itching, swelling and extrafacial extension, and the reproduction of these observations by a simple objective test (figure 1). Open challenge with chocolate resulted in immediate left-facial flush with no sweating. The patient received a diagnosis of Frey’s, or auriculo-temporal, syndrome, a rare complication of forceps injury frequently misdiagnosed as food allergy in childhood. After damage of the auriculo-temporal nerve, there is aberrant regeneration of parasympathetic fibres (which normally carry impulses to the salivary glands) in sympathetic pathways connected to blood vessels and sweat glands, leading to flushing and eventually to sweating during salivation. Bilaterality remains rare, and may be the only setting where a food allergy could be evoked, however, the flush characteristics remain sufficient to support the diagnosis. This benign condition has a good chance of improvement or spontaneous resolution in children, and no specific therapy is recommended. Knowledge of the typical clinical presentation of this rare condition should help the medical community to avoid confusion with food allergy, and to avoid referral to an allergist.

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Contributors LG-C and TB made the diagnosis. SB provided extensive bibliography on Frey’s syndrome. LG-C, SB, MA and TB drafted and approved the manuscript.

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