

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,¹ or auriculo-temporal, syndrome, a rare complication of forceps injury frequently misdiagnosed as food allergy in childhood.² 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.¹ 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.² 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.

Lisa Giovannini-Chami, Sibylle Blanc, Marc Albertini, Thierry Bourrier

Paediatric Pulmonology and Allergy Department, Hôpitaux pédiatriques de Nice CHU-Lenval, Nice, France



Figure 1 Unilateral left-facial flushing without urticarial wheals, nor lip swelling, distributed only on the auriculo-temporal nerve territory (cheek, temple, tragus), triggered by the child's favourite sweet food (chocolate) after a few seconds of mastication and disappearing spontaneously within a few minutes.

Correspondence to Dr L Giovannini-Chami, Paediatric Pulmonology and Allergy Department, Hôpitaux pédiatriques de Nice CHU-Lenval, 57 avenue de la Californie, 06200 Nice, France; giovannini-chami.l@pediatrie-chulenval-nice.fr

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.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

To cite Giovannini-Chami L, Blanc S, Albertini M, et al. *Arch Dis Child* 2014;**99**:457.

Accepted 16 January 2014

Published Online First 31 January 2014

Arch Dis Child 2014;**99**:457. doi:10.1136/archdischild-2013-305508

REFERENCES

- 1 Frey L. Le syndrome du nerf auriculo-temporal. *Rev Neurol* 1923;2:97–104.
- 2 Sicherer SH, Sampson HA. Auriculotemporal syndrome: a masquerader of food allergy. *J Allergy Clin Immunol* 1996;97:851–2.



Frey's syndrome: differential diagnosis of food allergy

Lisa Giovannini-Chami, Sibylle Blanc, Marc Albertini, et al.

Arch Dis Child 2014 99: 457 originally published online January 31, 2014

doi: 10.1136/archdischild-2013-305508

Updated information and services can be found at:

<http://adc.bmj.com/content/99/5/457.full.html>

These include:

References

This article cites 2 articles

<http://adc.bmj.com/content/99/5/457.full.html#ref-list-1>

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections

Articles on similar topics can be found in the following collections

[Immunology \(including allergy\)](#) (1366 articles)
[Child health](#) (2477 articles)
[Dermatology](#) (259 articles)
[Competing interests \(ethics\)](#) (108 articles)
[Asthma](#) (293 articles)
[Childhood nutrition](#) (453 articles)
[Health education](#) (381 articles)
[Health promotion](#) (424 articles)
[Injury](#) (261 articles)
[Journalology](#) (152 articles)

Notes

To request permissions go to:

<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:

<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:

<http://group.bmj.com/subscribe/>