'A recurrent cutaneous eruption'

Navin Kumar Devaraj

Department of Family Medicine,
Universiti Putra Malaysia Fakulti
Perubatan dan Sains Kesihatan,
Serdang, Malaysia

Correspondence to

Dr Navin Kumar Devaraj,
knavin@upm.edu.my

Accepted 10 January 2019

DESCRIPTION

A 47-year-old man presented to the primary care clinic for evaluation of rash. In addition to several itchy lesions over the body and face, he had itchiness over his hands, face and lips that began after eating lunch, consisting of eggs and crab. There was no associated shortness of breath, hypotension or difficulty in swallowing. The patient did not have a known IgE-mediated allergy or history of anaphylaxis to any foods. On examination, it was also noted that the patient had an annular lesion over his left arm that was violaceous red in colour (figure 1), itchy, non-blanching and non-tender. On further questioning, the man noted that he had developed a similar lesion over his left arm with prior ingestions of crab but no rash or immediate reaction ever associated with eating eggs. In addition to crab, the patient had also experienced this rash with certain medication ingestion, including non-steroidal anti-inflammatory drugs and penicillin. Despite similar reaction to crab in the past, the patient had elected to continue eating crab with thought that the reaction might not recur.

The patient was suspected to have fixed food eruption (FFE) secondary to ingestion of shellfish. Concurrent IgE-mediated allergy was also suspected, given the immediacy and character of symptom onset following ingestion. Although epinephrine was not required, the patient was

treated with antihistamines and advised to avoid crab in the future given concern for potential anaphylactic reaction.

FFE is a rare hypersensitivity reaction, characterised by recurrent cutaneous lesions at the same site on re-exposure to the offending food.¹ The pathophysiology of FFE is not definitively known, and may be multifactorial.² FFE usually present as a single or multiple erythematous plaques that will resolve spontaneously, leaving postinflammatory hyperpigmented lesions.¹ The typical timing of rash onset following food ingestion is usually 12–24 hours¹; however, Parker *et al* reported a case of FFE with almost immediate onset after ingestion of cashews and peanuts, implying that FFE might occur alongside IgE-mediated symptoms.²

The first use of the term FFE was in 1996, to describe a recurrent fixed lesion that occurred following ingestion of strawberry.³ Since this case report, many other food triggers have been found such as asparagus, cashews and lentils, among others.² Although the exact underlying pathophysiology driving FFE is not definitively known, the mechanism may be similar to that involved in fixed drug eruption, whereby drug-specific CD8+ T cells that persist in the skin are reactivated on drug re-exposure, leading to induction of apoptosis of keratinocytes and resulting in the phenotypic cutaneous lesion.⁴

Definitive diagnosis of FFE relies on replication of rash onset following oral food challenge to the suspected culprit food. Although an oral food challenge was not performed in this case, in the previously referred report by Kelso, physician observed challenge and ingestion of fresh strawberry caused skin eruption over the same site after 48 hours of reingestion.³

Management will entail strict avoidance of the offending food. Use of antihistamines and corticosteroids can be considered symptomatically. Further,

Figure 1 Violaceous skin lesion occurring over the same site over the left arm.

Learning points

- ▶ Fixed food eruption (FFE) is a unique hypersensitivity reaction whereby recurrent fixed cutaneous lesions appear at the same site on re-exposure to the offending food.
- ▶ Education on avoidance of potential culprit food is important in preventing the recurrence of FFE.
- ▶ Onset of FFE with concurrent IgE-mediated anaphylaxis appears to be possible, and thus thorough evaluation for both types of hypersensitivity is necessary when a food reaction is suspected.

© BMJ Publishing Group Limited 2019. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Devaraj NK. *BMJ Case Rep* 2019;**12**:e228355. doi:10.1136/bcr-2018-228355

in cases where FEE co-occurs with symptoms of anaphylaxis, appropriate use of epinephrine is recommended.

Acknowledgements The author would like to thank the patient for his kind permission in publishing of this image.

Contributors NKD as the sole author drafted, wrote and approved this article.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Sohn KH, Kim BK, Kim JY, *et al.* Fixed food eruption caused by actinidia arguta (Hardy Kiwi): a case report and literature review. *Allergy Asthma Immunol Res* 2017;9:182–4.
- 2 Parker AL, Pinson ML, Wohltmann WE, *et al.* Fixed food eruption caused by peanut and cashew: A case report and review of the literature. *J Allergy Clin Immunol Pract* 2015;3:119–22.
- 3 Kelso JM. Fixed food eruption. *J Am Acad Dermatol* 1996;35:638–9
- 4 Volz T, Berner D, Weigert C, *et al.* Fixed food eruption caused by asparagus. *J Allergy Clin Immunol* 2005;116:1390–2.

Copyright 2019 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/> BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- Submit as many cases as you like
- Enjoy fast sympathetic peer review and rapid publication of accepted articles
- Access all the published articles
- Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow