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Correspondence: Dr Matthew Ridd, Population Health Sciences, Bristol Medical School

University of Bristol, Canynge Hall, 39 Whatley Road, Bristol BS8–2PS, UK

E-mail: m.ridd@bristol.ac.uk

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Concise report

ORCID ID:

Matthew Ridd: <https://orcid.org/0000-0002-7954-8823>

Beliefs and practices among adults with eczema and carers of children with eczema regarding the role of food allergy

J. Chan¹ and M. J. Ridd¹

¹Population Health Sciences, University of Bristol, Bristol, UK

Summary

In this study, 211 carers of children and adults with atopic eczema/dermatitis (AE) completed an online questionnaire about diet and allergy. The study group comprised 106 children [mean age 5 years, Patient-Oriented Eczema Measure (POEM) score mean \pm SD 13.8 \pm 7.8] and 105 adults (age 35 years, POEM score 14.5 \pm 7.5). We found that 57% of respondents had discussed the role of diet in AE with a health professional and 38% felt this discussion was unhelpful or very unhelpful. Regarding testing, 53.6% reported having had an allergy test. Food exclusion was common; 68% of children and 46% of adults excluded one or more foods from their diet, with 40% of children and 52% of adults doing so to reduce AE symptoms. The most commonly avoided food among both children (63%) and adults (50%) was cow's milk. Only 17% of adults with modified diets had received dietary advice from a dietitian, compared with 57% of children. Clinicians should routinely ask patients about their views of diet in eczema and any changes that they have made, offering objective assessment where appropriate.

Many patients and carers of children with atopic eczema/dermatitis (hereafter, AE) worry about food allergy

Introduction

as a possible cause of the dry and inflamed skin.^{1–3} Although many children with AE may have co-existing food allergies, the direct role of specific foods in disease severity is unclear.⁴ Previous studies have suggested that dietary modification by parents of children with AE is common.^{1–2,5} However, these studies are now dated, and there are limited data about the beliefs and practices of adults regarding the role of food allergy in AE. We carried out a study to ascertain the beliefs and practices of adults with AE and carers of children with AE.

Ethics approval was received from the University of Bristol Health Science Student Research Ethics Committee. A draft version of the questionnaire was reviewed by two expert patients. Based on their feedback, changes were made to the introductory information and wording of some questions. Adults with AE and carers of children with AE were invited by social media (Twitter, Instagram and Facebook) to complete the final online-only version (JISC, www.onlinesurveys.ac.uk) between 16 and 30 July 2018.

A similar number of adults with AE and carers of children with AE took part (Table 1). The majority (85%) of respondents were resident in the UK, 74% described their ethnicity as white and most had moderately severe disease, by categorized Patient-Oriented Eczema Measure (POEM) score.⁶

Overall, 57% of respondents excluded one or more foods from their diet (68% of children, 46% of adults). The distribution of AE severity was similar among people who do and do not exclude any foods (Table 2).

The most commonly excluded food was cow's milk (table 3). Of those excluding any foods, the most common reason for both groups was due to an intolerance or food allergy (83% of children, 60% of adults), with 40% of children and 52% of adults excluding foods to reduce AE severity/symptoms (Table 3; the reasons given were not mutually exclusive).

The most commonly cited reason given by patients for excluding foods was their own personal experience of an immediate adverse reaction to a certain food (66%), with the next being advice from a healthcare professional (HCP) (53%). Allergists (64%) were the most commonly consulted HCPs. Regarding discussions with HCPs about the role of diet and AE, a similar proportion of respondents found the discussion helpful or very helpful (39%) as those who found it unhelpful or very unhelpful (37%). Of respondents who excluded food from their diet, 66% had received an allergy test (71% of children, 58% of adults) and 41% had received professional dietary advice from a dietitian (57% of children, 17% of adults).

As far as we are aware, this is the first study to compare dietary beliefs and practices in children and adults with data on AE severity. The online survey allowed us to rapidly collect responses from across the country, rather than single, specialist clinics, as seen in previous studies.^{1-2,5} Our sample had a wide age range and 74% of patients described their ethnicity as white, making this more generalizable to the wider UK than previous studies.^{1-2,5} We were able to capture AE severity utilising the POEM measure, with a broad distribution of severity among our respondents. However, as reflected in the high mean POEM scores, people with AE who are active on social media and who took part are unlikely to be representative of the wider population. Although many respondents excluding foods reported not having received advice from a dietitian, we are not able to say whether this has any implications for their general health.

The overall proportion of children with a reported dietary restriction (68%) in our study population is similar to those from previous UK studies in 1989 and 2004 (71% and 75%, respectively).^{1,2} Differences in food exclusion between adults (46%) and children (68%) are probably linked to adults 'outgrowing' their AE/food allergy or taking control over what they eat. Our finding that only 39% of patients found discussions with HCPs regarding diet in AE useful is compatible with previous work that has highlighted the dissonance between some clinicians and patients.^{3-7,8}

While the role of diet and allergy testing in AE remains unclear, our data indicates that diet modification is still common among patients. It appears that many patients adopt restricted diets without professional advice in an attempt to improve their condition, despite any attendant risks. Recent evidence has highlighted the risks of delayed introduction or exclusion of allergenic foods such as peanut.⁹ Clinicians should routinely ask about dietary restriction when consulting patients with AE but be cautious when discussing the relevance of allergy tests, discouraging the use of 'home testing' kits. The role of allergy testing in AE has been identified as a research priority,¹⁰ with studies such as TEST (Trial of Eczema allergy Screening Tests; www.bristol.ac.uk/AE-allergy) aiming to reduce uncertainty in this area.

Learning points

- Carers of children and adults with AE commonly modify their diets, in a bid to improve disease severity.
- The most commonly excluded foods are cow's milk, wheat and eggs.
- Clinicians should routinely ask patients about their views of diet in AE and any changes that they have made.
- People with AE that follow restricted diets should have the evidence for these restrictions objectively assessed by an HCP.

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Table 1 Characteristics of respondents ($n = 211$).

	Patients with AE	
	Children ($n = 106$)	Adults ($n = 105$)
Age, years; mean (range)	5.3 (0–15)	34.8 (16–70)
Mean POEM score, mean \pm SD	13.8 (7.8)	14.5 (7.5)
Female sex, %	51 (48%)	83 (79%)

AE, atopic eczema; POEM, Patient-Oriented Eczema Measure.

Table 2 Atopic eczema severity^a and exclusion or not of one or more foods.

POEM category	Does not exclude any food			Excludes one or more foods		
	Total, n (%) ($n = 91$)	Children, n (%) ($n = 34$)	Adults, n (%) ($n = 57$)	Total, n (%) ($n = 120$)	Children, n (%) ($n = 72$)	Adults, n (%) ($n = 48$)
Clear/almost clear	5 (6)	2 (6)	3 (5)	11 (9)	8 (11)	3 (6)
Mild	15 (17)	3 (9)	12 (21)	15 (13)	10 (13)	5 (10)
Moderate	42 (46)	17 (50)	25 (44)	42 (35)	25 (35)	17 (35)
Severe	23 (25)	10 (30)	13 (23)	35 (29)	21 (29)	14 (29)
Very severe	6 (7)	2 (6)	4 (7)	17 (14)	8 (11)	9 (19)
Total	91 (100)	34 (100)	57 (100)	120 (100)	72 (100)	48 (100)

^a As measured by Patient-Oriented Eczema Measure (POEM).

Table 3 Number (%) of respondents excluding one or more foods ($n = 211$).

Food type	Child		Adult	
	Total (%) $n = 72$	To reduce AE symptoms (%)	Total (%) $n = 48$	To reduce AE symptoms (%)
Cow's milk	45 (63)	18/45 (40)	24 (50)	15/24 (63)
Eggs	43 (60)	8/43 (19)	12 (25)	4/12 (33)
Other	33 (46)	12/33 (36)	20 (42)	9/20 (45)
Peanuts	34 (47)	6/34 (18)	18 (38)	2/18 (11)
Other nuts	32 (44)	6/32 (19)	20 (42)	6/20 (30)
Seafood	18 (25)	5/18 (28)	24 (50)	6/24 (25)
Fish	18 (25)	5/18 (28)	15 (31)	2/15 (13)
Wheat	14 (19)	6/14 (43)	15 (31)	8/15 (53)