

Adolescents' Perspectives on Atopic Dermatitis Treatment—Experiences, Preferences, and Beliefs

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IMPORTANCE For a considerable proportion of pediatric patients, atopic dermatitis symptoms persist into adolescence. Previous studies have focused mainly on (parents of) children, whereas little is known about adolescents with atopic dermatitis.

OBJECTIVE To explore the beliefs, experiences, and preferences of adolescents with atopic dermatitis toward their treatment.

DESIGN, SETTING, AND PARTICIPANTS We conducted a qualitative study employing focus group interviews of 15 adolescents (aged 12-18 years) who collected at least 1 prescription for topical corticosteroids in class 2 (moderately potent) or 3 (potent) in the preceding year. The study included 9 community pharmacies in 3 different regions in the Netherlands. Data were collected from November to December 2016, until data saturation was reached. Focus groups were recorded, transcribed verbatim, and data were analyzed by 2 researchers.

MAIN OUTCOMES AND MEASURES Adolescents' beliefs, experiences, and preferences toward their atopic dermatitis treatment were explored during focus groups. We used a thick analysis approach to analyze the transcripts; both deductive and inductive coding were used to analyze the transcripts.

RESULTS Three focus groups including 15 adolescents (8 male) with a mean age of 15.3 (range, 12-18) years were conducted. Adolescents were in general satisfied with the efficacy of the treatment; however, they prefer a faster and more persistent effect. Most adolescents had little contact with their physicians and did not completely adhere to the prescribed medication regimen; they developed their own routine of using topical corticosteroids in combination with emollients and moisturizers. They also seemed to have incorrect beliefs about the mechanism of action.

CONCLUSIONS AND RELEVANCE Adolescents developed their own way of using topical treatment for atopic dermatitis. Some practical suggestions were mentioned to improve medication use. Health care providers should devote special attention to adolescents with atopic dermatitis to make them more aware of the principles of topical treatment and ensure proper use.

JAMA Dermatol. 2018;154(7):824-827. doi:10.1001/jamadermatol.2018.1096
Published online May 30, 2018.

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For approximately 20% of pediatric patients with atopic dermatitis, symptoms persist into adolescence.¹ Appropriate use of emollients, moisturizers, and topical corticosteroids (TCS) is of utmost importance to reach sufficient disease control²; however, TCS adherence rates are generally low (eg, owing to corticophobia).³⁻⁶ During adolescence, many physical, social, and psychological changes occur, and body image plays a more important role. Having atopic dermatitis during this period may considerably affect quality of life.⁷ However, studies involving adolescents with atopic dermatitis are scarce.^{2,8} We therefore aimed to explore the beliefs, experiences, and preferences of adolescents with atopic dermatitis toward their treatment.

Methods

We organized focus groups (November and December 2016), including 4 to 6 adolescents per group, until data saturation was reached. We selected adolescents (aged 12-18 years) with atopic dermatitis in 9 community pharmacies. Adolescents were selected from the pharmacy information system based on medication filling: adolescents who filled at least 1 prescription of TCS in class 2 (moderately potent, D07AB) or 3 (potent, D07AC) in the preceding year were invited.⁹ All participants (and parents when younger than 16 years) provided written informed consent. Before the start of the focus groups, information on patient characteristics, such as age, sex, country of origin, and educational level were collected.

During the focus groups, 4 main topics were discussed: (1) impact on daily life, (2) medication use, (3) information provision, and (4) suggestions to improve treatment. The focus groups were audiotaped and the recordings were transcribed verbatim. A thick analysis approach was used to analyze the data; a codebook with thematic codes was developed beforehand and applied to all transcripts (deductive coding). Second, open codes were created and subsequently applied to all transcripts (inductive coding).¹⁰ Summaries were made per participant, and a combination of analytical techniques (searching and finding) and tactics (connecting) was used to obtain a comprehensive overview of the main themes.

All personal data was encrypted using a study code, ensuring privacy of all participants. The study was approved by the institutional review board of the Utrecht Pharmacy Practice network for Education and Research, Department of Pharmaceutical Sciences, Utrecht University. Data analyses were performed using ATLAS.ti (version 7.5.17, Scientific Software Development).

Results

Three focus groups (duration between 75 and 85 minutes) were held, including 15 adolescents (mean age, 15.3 years; range, 12-18 years) (Table 1). Most frequently mentioned issues are shown in the Figure, and quotes per focus group topic are shown in Table 2. Most adolescents had a neutral or indifferent attitude, whereas adolescents with severe atopic dermatitis often had a more negative attitude toward their disease.

Key Points

Question What are the beliefs, experiences, and preferences of adolescents regarding their atopic dermatitis treatment?

Findings This qualitative study including focus group interviews of 15 participants showed that adolescents were in general satisfied with their current treatment; however, they preferred a faster and more persistent treatment effect. Adolescents developed their own routine in using topical corticosteroids, emollients, and moisturizers, which often deviated from the medication regimen prescribed by their physician.

Meaning Clinicians should pay more attention to improving the treatment of adolescents with atopic dermatitis.

Itch and pain were commonly mentioned and almost all participants experienced worsening of symptoms after showering and physical exercise with sweating as a result. Few adolescents received negative comments or questions from peers and some adolescents adjusted their clothing to their symptoms, eg, wearing long trousers to cover the affected skin. Nonetheless, having atopic dermatitis did not interfere with daily activities of most participants.

Adolescents were in general satisfied with the efficacy of the treatment, however they preferred a faster and more persistent effect. Almost all adolescents developed their own routine in using topical treatment, which often deviates from the proposed medication regimen by the physician. In general, they used TCS more and longer than prescribed; half of the adolescents used TCS every day and did not (always) use emollients or moisturizers on a daily basis. Some of the patients with abundant TCS use reported thinner skin as a side effect, however they continued using it. The main reason for everyday use was the (lack of) efficacy when using less. Limited time, forgetting, and indifference were also mentioned as factors for aberrant use. In our study, the adolescents had a lack of knowledge about the treatment and incorrect beliefs about the mechanism of action. Negative experiences with the treatment were stickiness, bad odor, and itchy/burning feeling. The application of topical treatment was not time consuming, ranging from a few to 10 minutes; however, adolescents mentioned that the dermal absorption was slow and did not always fit with their busy schedules, eg, rushing in the morning to get to school.

Most adolescents had little contact with their physician and the advice on how to use TCS (in combination with emollients or moisturizers) differed between clinicians; general practitioner, dermatologist, and pharmacist. Some adolescents (with less severe symptoms) visited a physician only once and received repeat prescriptions without a physician visit, whereas others regularly visited their dermatologist or general practitioner. Most adolescents forgot the information they received at the start of treatment; however, at the time of the focus group they did not feel a need for additional information.

Mainly practical issues were mentioned as suggestion to improve treatment: a faster dermal absorption; oral treatment; test samples; a demonstration on how to use TCS at the start of treatment; follow-up visits with the physician, in particular at start of treatment; shorter (digital) information

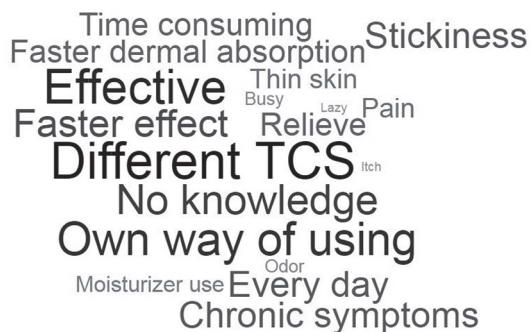
Table 1. Characteristics of the 15 Participants in the Study

Characteristic	No. (%)
Age, mean (range), y	15 (12-18)
Male sex	8 (53)
Native Dutch origin	14 (93)
Education	
High school: vocational level	9 (60)
High school: preuniversity level	5 (33)
University	1 (7)
Onset atopic dermatitis	
At birth	7 (47)
Childhood (8-11 y)	3 (20)
Adolescence (12-14 y)	5 (33)
Affected area atopic dermatitis ^a	
Head and neck	7 (47)
Upper limbs	11 (73)
Lower limbs	8 (53)
Anterior trunk	4 (27)
Back	4 (27)
Topical corticosteroids used ^b	
Moderately potent (D07AB)	9 (60)
Potent (D07AC)	8 (53)
Very potent (D07AD)	2 (13)

^a Adolescents could have more than 1 affected area.

^b Adolescents could use more than 1 type of corticosteroids.

Figure. Word Cloud With the Most Frequently Mentioned Issues by Adolescents Treated for Atopic Dermatitis



Abbreviation: TCS, topical corticosteroids.

leaflet; other packaging (jar or plastic tube); and (online) contact with peers was preferred during early adolescence.

Discussion

Our study showed that most adolescents with atopic dermatitis had a neutral or indifferent attitude toward their disease. They developed their own routine of using TCS, emollients, and moisturizers, and they were in general satisfied with the result. This does not always imply that their self-management routines are the preferred routine from a physician's perspective. However, adolescents received various instructions on the application of topical treatments from different clini-

Table 2. Overview of Adolescents' Quotes per Topic

Topic	Adolescent, Sex (Age, y)	Quote
Impact on daily life	Male (16)	"It's just normal to me... I'm used to it. Having atopic dermatitis does not make me differ from other adolescents."
	Female (16)	"At school it is sometimes hard to hold a pen, due to the affected skin on my hand it is hard to move my fingers."
Medication use	Male (17)	"The only thing I know is that you should not use it too often."
	Male (15)	"The symptoms do not totally disappear... I know that that's not possible, they will always return, but a faster effect would be great."
	Female (12)	"Sometimes it's annoying, especially in the morning, because greasy spots appear in my trouser due to the creams."
	Male (17)	"The label stated 'apply 3 times per day', but I only use it when I have symptoms."
Information provision	Female (16)	"If I apply the cream, it takes ages before it is absorbed."
	Female (12)	"I have been using topical corticosteroids for a long time, so I don't remember what they told me the first time."
	Female (14)	"At the moment, I don't need information about the application of creams, but it would have been useful at the start of treatment."
Suggestions to improve treatment	Male (13)	"It would be good if they showed you how to apply the cream, when collecting it for the first time."
	Female (14)	"A follow-up visit would have been great. Just to share experiences and to adjust treatment when needed. It will also help health care providers to improve themselves."
	Male (18)	"Currently I do not need it, but when one is younger it might be nice to share experiences with peers and receive advice from older children."

cians. Adolescents suggested mainly practical treatment improvements, such as a faster dermal absorption, a persistent and faster effect, and packaging suggestions.

The treatment of atopic dermatitis is complex because TCS should be alternately used with emollients and moisturizers, and they all have a different regimen. A recently published review² emphasized that TCS are more effective in combination with emollients or moisturizers. This emphasizes the importance of a clear explanation (and demonstration) of the treatment. Adolescents in our study also suggested this, and there is room to improve the knowledge of adolescents with atopic dermatitis, ie, the principle of the topical treatment was for most adolescents unclear and they had incorrect beliefs about the mechanism of action.

Limitations

Qualitative sampling is a suitable way to collect exploration data, however it has some limitations, for example the possibility of a response bias. These results might therefore not be generalizable to all adolescents with atopic dermatitis. Yet, our study population was a representative adolescent sample based on age, sex, and education level. Moreover, there was a broad heterogeneity in disease severity among the participants and all focus groups contained adolescents in a wide age range, which increases external validity.

Conclusions

The current study shows that adolescents developed their own way of using topical treatment for atopic dermatitis.

Some practical suggestions were mentioned to improve medication use. Health care providers should devote special attention to the treatment of adolescents with atopic dermatitis to make them more aware of the principles of topical treatment and ensure correct use.

ARTICLE INFORMATION

Accepted for Publication: March 23, 2018.

Published Online: May 30, 2018.

doi:10.1001/jamadermatol.2018.1096

Author Contributions: Ms Kosse had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: Kosse, Bouvy, Daanen, Koster.
Acquisition, analysis, or interpretation of data: All authors.

Drafting of the manuscript: Kosse, Daanen, de Vries.

Critical revision of the manuscript for important intellectual content: Kosse, Bouvy, de Vries, Koster.

Statistical analysis: Kosse.

Obtained funding: Bouvy, Koster.

Administrative, technical, or material support: Kosse, Bouvy, Daanen.

Supervision: Kosse, Bouvy, de Vries, Koster.

Conflict of Interest Disclosures: None reported.

Additional Contributions: The authors thank the adolescents who participated in the focus groups for their valuable input.

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