

PROBLEMS REGARDING THE TREATMENT OF ECZEMA AMONG CHILDREN: PHARMACY STAFF'S PERSPECTIVE

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A Master dissertation for the study programme Master in Pharmaceutical Care

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SUMMARY

Introduction:

Constitutional eczema is an inflammatory skin disease with typical symptoms such as itching, dryness, redness and skin peeling. It is estimated that 15-20% of the children younger than fourteen have eczema. The cornerstone of treatment is use of a daily moisturiser and applying a topical corticosteroid for severe eczema and during exacerbations. Non-adherence and corticosteroid phobia are major problems in the treatment of eczema. Pharmacy employees themselves, while having to counsel patients, may experience distrust or fear of topical corticosteroids which can influence patient behaviour. Furthermore, there is no consensus about the necessary amount to apply, resulting in confusion. This may lead to suboptimal medication use and poor disease control.

Objectives:

The aim of this study was to gain insight in the problems that a pharmacy staff encounters during treatment and counselling of children (aged 0-12 years) with eczema and their parents.

Methods:

Eighteen Dutch community pharmacy employees were interviewed. A coding tree with main themes and subthemes was designed to categorise the answers. Data was qualitatively analysed using NVivo Pro version 11.

Results:

Pharmacy employees encountered drug related problems, like non-adherence, corticosteroid phobia and creams and ointments that are too greasy. Furthermore, some employees themselves were reluctant to topical steroids if they had to apply it on their children. 'Apply thin' was sometimes still written on prescriptions or advised by pharmacy employees. Moreover, the Finger Tip Unit is still not used in two out of six pharmacies. It was often mentioned, by both pharmacists and technicians, that technicians lack practical skills. The available information for parents, for instance on the internet or on flyers, was often too complicated, unreliable or overwhelming.

Conclusion:

The most important problem that pharmacy employees encountered was non-adherence, possibly caused by steroid phobia and lack of good instructions and information about the complete treatment. Pharmacy employees have a crucial role in counselling children with eczema and their parents, but their theoretical knowledge fades, practical skills can be insufficient and counselling can be influenced by prejudices. By organising a training for pharmacy employees, this counselling could be optimised.

SAMENVATTING

Introductie:

Constitutioneel eczeem is een inflammatoire huidziekte met typische symptomen zoals jeuk, droogheid, roodheid en schilfering. Er wordt geschat dat 15-20% van de kinderen jonger dan 14 jaar eczeem hebben. De behandeling bestaat uit een dagelijkse hydraterende zalf of crème en topicaal steroïd bij ernstig eczeem of tijdens exacerbaties. Therapieontrouw en corticosteroïd fobie zijn veel voorkomende problemen bij de behandeling van eczeem. Apotheekmedewerkers zelf kunnen wantrouwig of angstig zijn tegenover steroïden tijdens het adviseren van patiënten, wat het gedrag van patiënten kan beïnvloeden. Daarnaast is er geen eensgezindheid over hoeveel gesmeerd moet worden, wat resulteert in verwarring. Dit kan leiden tot suboptimaal medicatie gebruik en slechte controle over de ziekte.

Objectieven:

Het doel van deze studie was om inzicht te geven in de problemen waar een apotheekteam tegen aan loopt tijdens de behandeling en de begeleiding van kinderen (0-12 jaar) met eczeem en hun ouders.

Methodes:

Achttien Nederlandse openbare apotheekmedewerkers werden geïnterviewd. Een code boom met hoofdthema's en subthema's werd opgesteld om de antwoorden te categoriseren. De data werd kwalitatief geanalyseerd, gebruikmakend van NVivo Pro versie 11.

Resultaten:

Apotheekmedewerkers ervaarden problemen, zoals therapieontrouw, corticosteroïd fobie en te vette crèmes of zalven. Bovendien waren sommige medewerkers zelf terughoudend of bang om topicale steroïden te gebruiken bij hun kind. 'Dun aanbrengen' werd soms nog geschreven op voorschriften of geadviseerd door sommige medewerkers. Daarnaast gebruikten twee van de zes apotheken de Finger Tip Unit niet. Zowel apothekers als assistentes haalden aan dat praktische vaardigheden ontbreken bij de assistentes. De informatievoorziening voor ouders, bijvoorbeeld op het internet of in folders, was soms te ingewikkeld, onbetrouwbaar of te veel.

Conclusie:

Het belangrijkste probleem waar apotheekmedewerkers tegen aan liepen was therapieontrouw, mogelijk als gevolg van corticosteroïd fobie en gebrek aan goede instructies en informatie over de volledige behandeling. Apotheekmedewerkers hebben een cruciale rol in het begeleiden van kinderen met eczeem en hun ouders, maar hun theoretische kennis vervaagt, praktische vaardigheden kunnen onvoldoende zijn en begeleiding kan beïnvloed zijn door vooroordelen. Door het organiseren van een training voor apotheekmedewerkers kan deze begeleiding mogelijk geoptimaliseerd worden.

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LIST OF ABBREVIATIONS

FTU: Finger Tip Unit

GP: general practitioner

KNMP: Koninklijke Nederlandse Maatschappij ter bevordering der Pharmacie (Royal Dutch Pharmacists Association)

NHG: Nederlands Huisartsen Genootschap (Dutch College of General Practitioners)

1 INTRODUCTION

1.1 PATHOPHYSIOLOGY

Constitutional eczema, also known as atopic dermatitis or atopic eczema, is an inflammatory skin disease. The word 'atopic' refers to atopy, which means the predisposition to hypersensitivity to certain elements. Additionally, 'constitutional eczema' indicates that this predisposition is genetically determined. Other examples of atopic diseases, besides constitutional eczema, are asthma, food allergy and allergic rhinitis. Patients often suffer from multiple atopic diseases at the same time [1,2]. Between about 30 to 35% of the children with eczema will also have asthma and more than 50% will have allergic rhinitis. The worldwide prevalence of eczema for children younger than fourteen is estimated between 15 to 20% [3]. About 95% of patients with eczema experience the onset below the age of five [4].

Typical symptoms of eczema are itching, dryness, redness, skin peeling and lichenification [5,6]. Lichenification is a result of the constant scratching and refers to the thickening of the skin, thus giving it a leathery look. The first symptoms occur during the first six months after birth [5]. Eczema at young age usually starts in the face, with especially affected areas on the cheeks and forehead. A typical phenomenon among these young children is the 'narcosis cap', referring to the skin next to the nose and mouth, which is free of eczema [1].

The origin of eczema is not yet completely clarified. In most researches two main theories are found. The first theory assumes that there is a defect in the skin barrier function, caused by mutations in the filaggrin gene. This gene encodes structural proteins which hold keratinocytes together and prevent transepidermal loss of water. A defect in this gene results in an impaired skin barrier function and loss of transepidermal water, resulting in dryness of the skin. It is assumed that this damage facilitates the penetration of allergens and irritating elements into the skin, which leads to an inflamed skin. The other theory assumes that there is a disturbance in the immune system of the patient, which puts the adaptive immune system out of balance. Synthesis of type 2 T-helper cells predominates, while differentiation of type 1 T-helper cells is inhibited. Increase of type 2 T-helper cells leads to an increased production of interleukins, which causes an augmentation of the antibody level. The most likely explanation is that eczema is caused by a combination of these two theories and that they complement each other [4,7].

Eczema can be distinguished in two forms: the acute and chronic form. In the acute form red infiltrate with oedema, crusting, oozing and vesicles are seen, whereas the chronic form is characterized by papules, nodules, excoriations and lichenification [5]. Some factors, like water and soap, may trigger these exacerbations.

Furthermore, the affected areas usually differ between various ages. For instance, infants and toddlers mostly have symptoms on their face and head. Children older than two on the other hand, experience eczema in the hollow of knees and elbows and on their wrists and ankles [8].

1.2 IMPACT ON THE QUALITY OF LIFE

Studies have shown that eczema in childhood affects the quality of life of children and their families. Constitutional eczema has a psychological, social and physical impact on the life of both children and their parents [9].

First of all, children sometimes feel embarrassed and may be teased or even bullied, which can lead to social isolation. They are more restricted in their daily activities, e.g. in playing outside, taking a bath, swimming, clothing or holidays. Furthermore, some children experience sleep deprivation, due to constant itching [9,10].

Parents' sleep may also be influenced, because they try co-sleeping to help their children sleep and stop scratching and because their children may cry at night. Because of this sleep disruption, they become tired and have mood changes. Parents may feel exhausted, guilty and responsible for the eczema. Sometimes they are even accused of abuse or neglect by strangers. Moreover, they notice that other adults and children avoid contact or playing with their children. The costs of the therapy also have an influence on the quality of life of families with lower incomes [9,10].

1.3 ASSESSMENT OF SEVERITY

According to the Dutch College of General Practitioners (NHG or Nederlands Huisartsen Genootschap), the Three Item Severity score or TIS score is an effective tool to characterize the severity of eczema. It is used by general practitioners (GP) and dermatologists to prescribe the most suitable treatment for the patient based on disease severity. The affected skin is evaluated for three typical aspects of eczema, namely erythema, oedema/papules and itching. Each aspect receives a score: absent = 0, mild = 1, moderate = 2 and severe = 3. These scores are summed up, resulting in a number between zero and nine. A TIS score below three means mild eczema. The eczema is categorized as severe when the TIS score is higher than six [11].

1.4 TREATMENT

1.4.1 Prevention

There are some practical advices to prevent eczema symptoms. For instance, it is well known that water and especially hot water has a dehydrating effect. Therefore, it is better to bathe or shower as few times and as short as possible. Swimming also harms the skin. Moreover, soap dehydrates skin, so special soap from the pharmacy and a mild shampoo are recommended. On the other hand, bath oil is a good remedy to prevent dryness of the skin. Furthermore, wearing clothes with nylon or wool should be avoided because they irritate the skin. Dust, cold weather, sweating, scratching and some pets are also factors associated with exacerbations of eczema. Naturally, these triggers must be avoided as much as possible to minimize the number of exacerbations [1,2,5,12,13].

1.4.2 Medical treatment

1.4.2.1 Moisturiser

Typical eczema symptoms, i.e. itching and lichenification, are caused by dryness of the skin. The basic treatment for eczema is applying a moisturiser daily, thus a neutral, greasy cream or ointment to rehydrate dry skin [2,5]. Vaseline cetomacrogol cream, vaseline lanette cream and cooling ointment are examples [6]. There are different kinds of moisturisers, all with a different ratio of greasy and water components.

1.4.2.2 Corticosteroids

A corticosteroid is often prescribed to use for more severe eczema and during exacerbations [2,4]. Corticosteroids treat the inflamed skin by suppressing the immune response. This reduces redness and itching. Studies have shown that combining a topical corticosteroid and moisturiser is more effective than a topical corticosteroid alone to reduce severity and flares [14]. There are several types of corticosteroids, ranging from a less potent corticosteroid (class 1) to a very potent corticosteroid (class 4), as is shown in table 1.1 [15].

Table 1.1.: Different classes of corticosteroids with examples [15,16]

| Class 1 | Class 2 | Class 3 | Class 4 |
|--|--|--|---|
| <ul style="list-style-type: none">• Hydrocortisone acetate | <ul style="list-style-type: none">• Clobetasone butyrate• Flumethasone pivalate• Hydrocortisone butyrate• Triamcinolone acetonide | <ul style="list-style-type: none">• Betamethasone valerate• Desoximetasone• Fluticasone• Mometasone | <ul style="list-style-type: none">• Betamethasone dipropionate• Clobetasol |

The GP will choose the class that is recommended by the NHG guideline (Table 1.2), depending on the severity of the eczema [17]. The guideline states that moderate eczema should be treated with a corticosteroid from class 1 or 2. Short treatment with class 3 occurs when the eczema is severe, so that the duration of the treatment is restricted and risk of side effects is minimal. Yet in the face and in skinfolds class 1 and 2 are preferred, since caution is required in zones where the skin is thinner [17,18]. The dermatologist on the other hand follows the guidelines of the Dutch Association for Dermatology and Venereology (NVDV or Nederlandse Vereniging voor Dermatologie en Venereologie). These guidelines are more extended than the guidelines from the NHG [19].

Table 1.2: Guidelines from the NHG for the treatment of eczema [17]

| Eczema severity | Treatment |
|--|---|
| Mild eczema (TIS < 3) | <ul style="list-style-type: none"> • Daily moisturizer |
| Moderate eczema (TIS = 3-5) | <ul style="list-style-type: none"> • Daily moisturizer • Class 1 or class 2 corticosteroid |
| Severe eczema (TIS ≥ 6) | <ul style="list-style-type: none"> • Daily moisturizer • Class 3 corticosteroid (not in face or body folds) for maximum 2-3 weeks • For children: preferably a short half-life |
| Frequent recurrences | <ul style="list-style-type: none"> • Daily moisturizer • Pulse therapy: class 2 corticosteroid for 2-4 consecutive days |
| Resistance to corticosteroids or side effects due to corticosteroids | <ul style="list-style-type: none"> • Calcineurin inhibitors • Oral immunosuppressives |
| Insomnia due to itching | <ul style="list-style-type: none"> • Antihistamine |
| Infected eczema | <ul style="list-style-type: none"> • Antibiotics and antivirals |

In the past, it was always instructed to apply the corticosteroid sparingly or thin, but this sends a message of caution and even danger because patients interpret this adversely [20]. To achieve consensus in the necessary quantity, Long and Finlay introduced a new concept in 1991: the Finger Tip Unit (FTU) [21]. Furthermore, the Royal Dutch Pharmacists Association (KNMP or Koninklijke Nederlandse Maatschappij ter bevordering der Pharmacie) deleted the instruction to apply thin on labels and started to promote the FTU in the Netherlands in 2013.

The FTU is illustrated in figure 1.1 and specifies the amount of cream or ointment that is necessary to apply. One FTU equals a line of cream that is as long as the index finger tip of an adult. This amount is about 0,5 grams of ointment [22]. The necessary amount of FTU depends on the surface of the affected skin and the age of the patient. When the condition of the skin is improved, it is recommended to reduce the frequency of applying corticosteroids through a tapering schedule. This is to minimize the risk of side effects [2,23].



Figure 1.1: the Finger Tip Unit [22]

1.4.2.3 Other treatments

As shown in table 1.2, there are more treatments. Another option to reduce inflammation of the skin is the use of calcineurin inhibitors [1,2,4]. Tacrolimus and pimecrolimus are the most common known examples. Calcineurin inhibitors are used when topical corticosteroids do not work or have side effects [1,2,4]. Besides that, oral immunosuppressives, like cyclosporine A or azathioprine, are prescribed when the patient is resistant to topical corticosteroids [17]. Furthermore, antihistamines can help to reduce itching, so patients can get a good night sleep [2,4]. Antihistamines are only prescribed when the patient experiences insomnia due to itching [17]. When eczema gets infected, a short treatment with an antibiotic or antiviral cream or ointment might be required. In extreme cases an oral antibiotic is prescribed [2,4].

1.5 DRUG RELATED PROBLEMS

The cornerstone of treating eczema is applying a moisturiser and a topical corticosteroid. Patients can experience some problems during treatment with these creams or ointments. For instance, applying corticosteroids can lead to side effects. Furthermore, patients can be anxious to use corticosteroids. Besides those problems, non-adherence and practical problems are also difficulties that are seen in treating eczema.

1.5.1 Side effects due to topical corticosteroids

Like most medicines, topical corticosteroids may have side effects. One of the adverse events is skin thinning, but if used properly, corticosteroids will not cause irreversible skin thinning. Furthermore, corticosteroids can cause striae in children when they are used inappropriately or overdosed. In that case, it is mainly the armpits and groin that can get affected. Use of potent or very potent corticosteroids can lead to suppression of the hypothalamic-pituitary-adrenal axis. This occurs when they are applied under occlusion, used widespread or for too long. However, this is clinically insignificant and recovery happens quickly [24].

In rare cases, long use of potent corticosteroids in the area around the eye socket has been associated with cataracts. Also glaucoma can be associated with long use of potent corticosteroids. Furthermore, hypertrichosis or abnormal hair growth is a temporary side effect of potent corticosteroids. Occurrence of reduced bone mineral density is a very rare side effect in children who use corticosteroids. Hypopigmentation is mistakenly thought to be caused by corticosteroids, but this is a result of the eczema [24].

The severity of possible side effects depends on different factors, for instance the concentration and potency of the corticosteroid. Furthermore, the age of the patient, the severity and localisation of eczema play an important role too [25,26]. The risk of side effects is minimal on condition that they are used properly and as prescribed [4,27].

1.5.2 Practical problems

Besides the possible side effects, parents may experience practical problems during the treatment of eczema, leading to a decrease in compliance. For instance, children sometimes refuse to co-operate, because it is annoying for them, making it difficult to apply the cream carefully. Furthermore, parents focus on finding a causing allergen, so they neglect taking care of the skin itself [28].

A study from 2011 investigated the problems that parents experience due to using topical corticosteroids. They found that only 27.2% of the parents said they were never afraid of applying too much cream on their children [27]. This means 72.8% of the parents were at least once afraid of the quantity of cream they applied. Uncertainty about the right quantity to apply is another practical problem that parents encounter.

1.5.3 Non-adherence

A study in 2006 investigated adherence to topical corticosteroids among dermatitis patients. After a follow-up of 12 weeks, adherence declined to 42% [29]. Another study examined adherence among children with eczema. The average adherence was 32% [30]. Adherence was higher when a consultation at the GP was near, but it decreased rapidly. It is clear that poor adherence leads to poorly controlled disease. Furthermore, it results in more hospital admissions and elevated health care costs [31].

Besides the general causes for non-adherence, such as distrust, worries, and scepticism, other factors may influence non-adherence. One of the main reasons for steroid non-adherence is corticosteroid phobia. This fear has a negative impact on adherence to the prescribed treatment. Another reason for non-adherence is that the

treatment only controls the symptoms, but does not cure. This requires a lot of time to apply the cream or ointment. Therefore, it is difficult for parents to persist in the daily treatment [32].

Moreover, the complexity, frequency and duration of the treatment make it difficult to maintain the treatment. It was discovered that a lot of parents have an insufficient knowledge about eczema and the treatment for it. This may result in mistakes in therapy and in application of the medicine [32].

1.5.4 Corticosteroid phobia

There are a lot of misunderstandings and fears about the possible side effects of topical corticosteroids [33]. Using corticosteroids is a frequent concern for patients with eczema. This phenomenon is called corticosteroid phobia. It is estimated that about 40 to 73% of patients and parents of patients with eczema experience fears [27,33-35]. A study in 2011 investigated corticosteroid phobia and searched for its origins. Most of the patients were afraid of applying too much cream, using it for too long or putting cream on zones where the skin is thinner, e.g. the eyelids. Only 17.4% said they never needed reassurance about topical corticosteroids. In other words, 82.6% were in need of reassurance at least once in a while. Patients also feared the adverse side effects, distrusted the information from physicians and the physicians themselves. They thought beneficial effects were only temporary and the treatment would be ineffective [27,36]. Especially parents of children with eczema were afraid of side effects, like skin-thinning. Furthermore, they were insecure about the effect on the immune system [37].

It is clear that these numbers of low adherence and corticosteroid phobia need improvement. Many parents are scared of using corticosteroids to treat their children, even though this is a central component of the treatment [6,15,22].

1.6 INFORMATION FROM THE PHARMACY AND OTHER HEALTH CARE PROVIDERS

As the pharmacy employee is the last person that parents see before treatment is started, patient-centred communication and clear instructions are crucial. Patient counselling by pharmacy employees can be influenced by their own prejudices about topical corticosteroids. A French study in 2016 examined corticosteroid phobia among pharmacists themselves and showed that pharmacists only had moderate confidence in treatment with steroids. This mistrust may influence patient counselling and lead to fear of corticosteroids among patients. Furthermore, the information from different caregivers can differ and therefore add to corticosteroid phobia [38].

Smith et al. investigated the opinion of both pharmacists and dermatologists about the statement 'applying topical corticosteroids sparingly'. Approximately 21% of the dermatologists agreed with this instruction [39]. However in another study from Smith et al., 54% of the pharmacists advised their patients to use these creams sparingly. Only 41% stated that they instructed their patients to apply either generously or to use the FTU [40]. Not only is there inconsistency between dermatologists and pharmacists, but also advices within the pharmacist group and within the dermatologist group differ. This may cause confusion among patients.

Moreover, Smith et al. examined the knowledge of Australian pharmacists before and after an evidence-based education by a dermatologist. Pharmacists' belief in side effects due to the topical corticosteroid dropped from 56% to 11% because of this lecture. Furthermore, they would adjust instructions for applying cream. The number of pharmacists that would advise to use topical corticosteroids until the skin is free of eczema increased from 27% to 92%. In addition, the instructions to use topical corticosteroids sparingly dropped from 54% to 8% [40]. This suggests that this kind of education attributes to a better information provision towards the patient.

Swedish focus groups with patients and healthcare providers identified opinions about the role of dermatologists, nurses and pharmacists in dermatological care. Patients noted that pharmacists lack information about their clinical history and sometimes did not understand their circumstances. Further, they felt uncomfortable to ask questions, because of the lack of privacy in the pharmacy setting. Both healthcare providers and patients expressed that current co-operation is restricted and often results in conflicting guidance for patients and unnecessary worries. Not only the healthcare providers, but also the patients wished for better co-operation between dermatologists, nurses and pharmacists, with the intention to create common guidelines and with less conflicting advice as a result [41].

1.7 RATIONALE FOR THIS STUDY

Many studies reported difficulties in the treatment of eczema and in its support, mainly from the perspective of patients and parents of children with eczema. Many patients are worried about using corticosteroids, adherence is low, patients get conflicting advice and pharmacists have only moderate confidence in topical corticosteroids. All these problems lead to suboptimal medication use and poor disease control.

The literature describes mostly the vision of parents of children with eczema, but not the view of (Dutch) pharmacy employees. Therefore, this study was designed to gain insight into the problems that pharmacists encounter while counselling young eczema patients and their parents.

2 OBJECTIVES

The aim of this study was to gain insight into the problems that pharmacy employees encounter in the current treatment, support and information provision for children (age 0-12 years) with eczema and their parents. Firstly, this study wished to examine the problems that occur during the counselling of the treatment with topical corticosteroids and moisturisers. Secondly, the collaboration with other caregivers was investigated. Thirdly, the aim of this study was to discover which information is provided for the parents and if this information is sufficient. Finally, the knowledge and skills of pharmacy employees were determined.

This study was the first phase of the OKEE-study (“Optimaliseren van behandeling van Kinderen met Eczeem in de Eerstelijjn” or “Optimizing the treatment of children with eczema in the first line”). The main objective of the OKEE-study is to develop an intervention guide for pharmacy employees. This guide will contain supporting materials and information to improve their knowledge about treating eczema and their communication with the patient. In this way, they can support the patient with a targeted approach. The results of this study will serve as input for the desired intervention guide.

3 METHODS

3.1 STUDY DESIGN

The study protocol was submitted to the Institutional Review Board from the Department of Pharmaceutical Sciences of Utrecht University. After approval, a group of Dutch community pharmacies from the UPPER-network were contacted by e-mail and were invited to participate. UPPER (Utrecht Pharmacy Practice network for Education and Research) is a research network of the Department of Pharmaceutical Sciences of Utrecht University.

The first pharmacies who signed up, were included in the study. To collect the required information, interviews with pharmacy employees were carried out by two Master Pharmacy students. In each pharmacy three employees were interviewed: one pharmacist and two pharmacy technicians. Pharmacies were included in the study until data saturation was reached.

3.2 INTERVIEWS

A list with open-ended questions was made in advance by both students, as shown in appendix 1. The interview consisted of five different main themes (Figure 3.1). The interviews were held face-to-face at the pharmacy and were recorded with a voice-recorder.

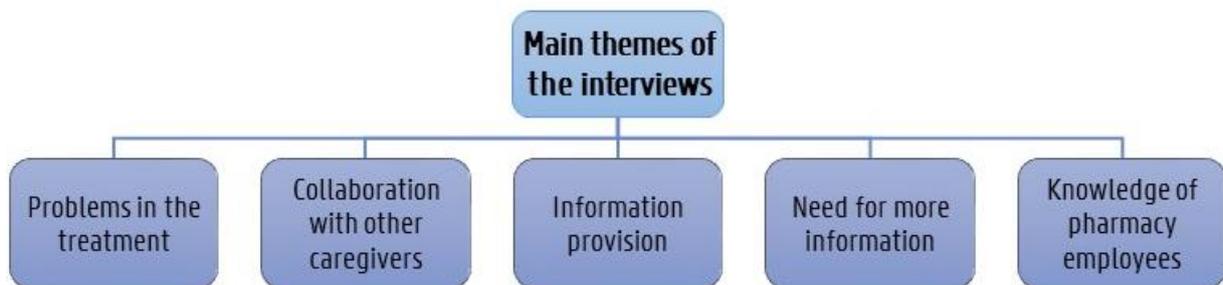


Figure 3.1.: The five main themes of the interviews

The students interviewed the pharmacy employees. One student asked questions, while the other student took notes. The duration of one conversation was estimated to be approximately 20 minutes. After collecting the data, the recorded interviews were anonymised and transcribed.

3.3 DATA ANALYSIS

The transcribed interviews were analysed through NVivo Pro version 11, a software program to perform qualitative analysis on data. Before using NVivo Pro, the interviews were examined to get an idea about the

central thread and an initial coding tree was designed to categorize the answers to the open-ended questions. First of all, the coding tree was composed of the five discussed main themes of the interviews. Second, subthemes were created to classify the answers of the pharmacy employees. As employees from the same pharmacy may encounter different problems and may have different opinions, all employees were analysed separately and not clustered per pharmacy.

To eliminate differences in coding by separate investigators, the two Master students coded three interviews independently from each other. The three interviews were compared afterwards and the coding tree was discussed. After adding new codes and rephrasing some codes, the coding tree was completed (see Appendix 2).

The interviews with the pharmacy employees were then coded by attaching different applicable codes to their quotes. For instance, if a quote dealt with a problem with non-adherence in topical corticosteroids, that quote received the codes: 'problems', 'drug related problems', 'non-adherence' and 'corticosteroids'. After coding all the interviews, the coding tree in NVivo presented the frequency of the codes. These frequencies were analysed to determine common codes, to give an idea of the most recurring themes. Furthermore, quotes were picked out to demonstrate the findings for all themes and subthemes.

4 RESULTS

Data saturation was reached after eighteen interviews, thus in total six pharmacies participated (three interviews per pharmacy). An overview of the most important reported problems that children and parents experience according to pharmacy employees, is shown in table 4.1. An issue was considered important if it was mentioned by multiple interviewees or if it was contradictorily to advices in the literature or guidelines. Furthermore, shortcomings in the provision of information or counselling were regarded as noteworthy problems.

Table 4.1.: Overview of the most important reported problems mentioned by pharmacy employees

| Main theme | Most important reported problems |
|-------------------------------------|---|
| Drug related problems | Non-adherence |
| | Fear of using corticosteroids among patients |
| | Too greasy creams and ointments |
| Collaboration with other caregivers | Outdated advice on prescriptions: 'Apply thin' |
| | No follow-up consults |
| | Incomplete treatment: no moisturiser prescribed/used |
| Provision of information | No tapering schedule |
| | Lack of leaflets for children |
| | 'Apply thin' |
| | No advices about the FTU |
| | Reluctant pharmacy employees |
| Knowledge of pharmacy employees | Differences in information between pharmacy employees |
| | Insufficient practical knowledge |
| | Fading theoretical knowledge |
| Need for information | Need for more information |
| | Complicated leaflet |
| | Unreliable websites |
| | Too much information |

4.1 PROBLEMS DURING THE TREATMENT OF CONSTITUTIONAL ECZEMA WITH CHILDREN

In the first topic, the pharmacy employees were asked what drug related problems they noticed in the treatment of eczema among young children. Non-adherence was most frequently mentioned, followed by fear of using corticosteroids and creams or ointments being too greasy.

As non-adherence was the most reported issue, there were a lot of quotes about this problem. First of all, according to pharmacy employees, parents applied too little cream or ointment and were too careful. Another aspect of non-adherence was that parents only applied a topical corticosteroid, without using a moisturiser. Moreover, they did not follow a tapering schedule and suddenly quit applying the topical corticosteroid.

Pharmacist 1, female: "I think that that they (creams or ointments) are much less used than prescribed."

Pharmacy technician 1, female: "Well, that they often do not use a moisturiser with the hormone ointments."

Pharmacist 2, female: "And I think that people quit too early. So from one moment to the next they quit and don't use a tapering schedule."

On the other hand, some pharmacy employees said that they did not see problems in adherence. Corticosteroid phobia was the second main problem that pharmacy employees came across. Before the introduction of the FTU, patients were always told to apply thinly, but this was not correct. Parents were especially afraid of the side effects.

Pharmacy technician 3, female: "If you apply too thin, then it will not work. And you really have to convince people very hard of that. They are afraid to apply too thick. [...] Concerns... Yes. 'You have to apply it thin, right?', they say. Especially the side effects. People think that those are a big deal."

However, some of the pharmacy employees did not notice fear of using corticosteroids. The third most frequent problem was related to moisturisers that were too greasy. Therefore, parents would not use a moisturiser.

Pharmacy technician 5, female: "But I frequently hear that they find it too greasy. And therefore they do not apply enough. For example, they skip one time because they want to wear pretty clothes."

4.2 COLLABORATION WITH OTHER CAREGIVERS

Most of the pharmacies did not notice issues in the collaboration with other caregivers. An issue that pharmacy employees encountered were prescriptions for a topical corticosteroid with the instruction 'to apply thin'. This is unclear and confusing to interpret for the patients. Therefore, on initiative of a GP, they removed the word 'thin' when dispensing a topical steroid. Another problem with the prescriptions is that they often only contained a topical corticosteroid, but not a moisturiser. Therefore, patients were confused when they suddenly received a topical corticosteroid and a moisturiser in the pharmacy, because the GP did not inform them about the latter.

Pharmacist 3, female: "Because very often there has been written 'apply twice daily thin' on a prescription, but we always convert this to 'apply twice daily:'"

Pharmacist 4, female: "Maybe they haven't heard it yet at the GP. And then you give the advice to use a moisturiser and they say: 'Oh, is this extra? Do I have to apply more (a second cream)? Why is that?'"

One of the pharmacists mentioned that she noticed that patients struggled with the prescribed therapy. This could be the result of an ineffective therapy or inadequate use of the creams and ointments. She thought this was caused by one-time consultations to the GP and lack of follow-up consults. Therefore, returning to the GP and more guidance in the treatment is considered necessary.

4.3 INFORMATION THAT IS GIVEN DURING THE FIRST DISPENSING CONVERSATION AT THE PHARMACY

This topic investigated the information that is given by pharmacy employees and the available extra information for parents. The chart in figure 4.1 illustrates the instructions that are given at the first dispensing conversation for applying a topical corticosteroid.

First of all, seven out of eighteen interviewees mentioned that they explained the FTU to their patients. These seven interviewees were from four different pharmacies. A fifth pharmacy only advised to use the units when parents specifically asked how much they needed to apply. Otherwise, they instructed to not apply thin. Furthermore, the sixth pharmacy admitted that they knew about the existence of the FTU, however they did not use it. Additionally, the three employees from this pharmacy gave the instruction to apply thin, as shown in figure 4.1. Other interviewees advised their patients to not apply too thin, but also not too thick. That explains the total amount of reports which is bigger than eighteen.

Pharmacist 4, female: "And of course, you have those FTU's, Finger Tip Units. Well, I have to say that we don't really work with it to indicate how much you have to use. We do not have this as a standard. Just apply thin, because it is still a hormone cream."

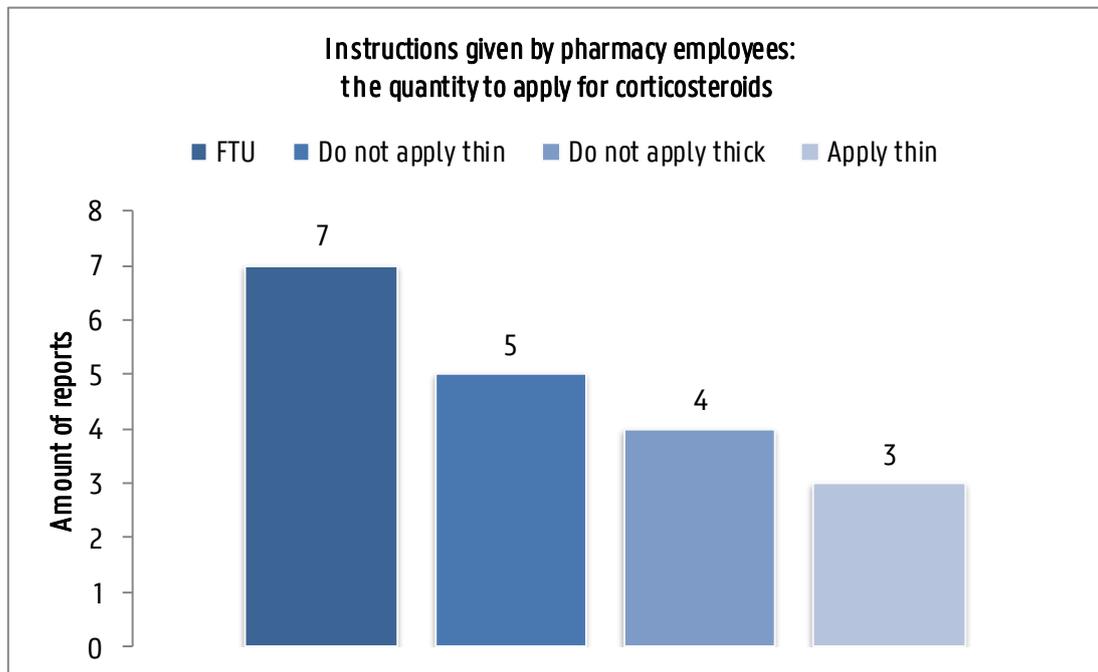


Figure 4.1: Instructions given by pharmacy's staff: necessary quantity for applying topical corticosteroids

Some interviewees mentioned a lack of extra information for parents. For instance, one pharmacist would have liked to give a tapering schedule to her patients, but she did not want to interfere with the tasks of GPs. Therefore, she wished to bring this up at a Pharmacotherapeutical Consultation, so they could discuss if the pharmacy could give the patient a treatment schedule and a tapering schedule. This is in contrast to some other pharmacies who did have a tapering schedule.

Pharmacist 2, female: "There is no tapering schedule at all. But I would like to have it. [...] And I prefer one schedule to give. But that is not possible, because then you interfere with something that the GP must do."

Some interviewees mentioned that they dispense leaflets created for children, so they could understand what eczema implies. But it was noticed that for some of the most common creams or ointments the leaflet for children was absent.

Pharmacy technician 6, female: "Nowadays, with a lot of creams there is a leaflet for children. But with two frequent used creams there is not. So that might be a point of attention. Then it is easier for children. That they can see: 'Oh, I have that.' So that they understand it better."

Additionally, pharmacy employees were asked about their opinion about the use of topical corticosteroids. Most of them agreed that there are no objections to apply them, if used as prescribed. Some interviewees were reluctant and admitted that they would rather avoid using corticosteroids themselves.

Pharmacy technician 5, female: "I do not like it. First, I would rather try other things before I start with corticosteroids for my own son."

4.4 NEED FOR EXTRA INFORMATION ABOUT CONSTITUTIONAL ECZEMA FOR PARENTS

The pharmacy staff was asked if they experienced that parents were in need of more information about constitutional eczema among children. Thirteen pharmacy employees (72.2%) did not notice a necessity for more information. On the other hand, five pharmacy employees mentioned a need for more information (27.8%).

Pharmacist 2, female: "I think that they really, but really want a lot of information. Because they are very worried about their children. So they really are looking for information."

Moreover, the opinion about the currently available information was discussed. Some pharmacy employees had some remarks on the provided information. Firstly, some of them pointed out that parents search on the internet, but end up on websites with unreliable information. Secondly, it was sometimes reported that parents are overwhelmed with information. Therefore, they lost a clear overview. Thirdly, it was mentioned that leaflets may be too complicated to understand. For this reason, some provide a flyer from the pharmacy system which contained a simple summary of the leaflet for patients.

Pharmacist 2, female: "But I think that patients really search on internet. But the question is if they end up on the right site. [...] With a high Google rating at the top. Precisely the bad things, they are at the top."

Pharmacy technician 8, female: "Well yes, sometimes too much information as well. People sometimes think it is too much of this and that. Not always even clear."

Pharmacist 1, female: "Because the leaflet is often quite complicated to read. And it is difficult to search where the actual practical information is that you need as parents to use it well."

4.5 KNOWLEDGE OF PHARMACY EMPLOYEES ABOUT CONSTITUTIONAL ECZEMA

The knowledge and skills of pharmacy employees about eczema and counselling of patients was also discussed in the interviews. First of all, pharmacists mentioned that the theoretical knowledge of technicians is good, but very basic. Furthermore, both pharmacists and technicians admitted that new insights in the current

therapies and information gained in courses faded after a while. Thus a lot of them suggested to organise new and more courses.

Pharmacist 5, male: "I think that it (theoretical knowledge) is very basic. It is not a subject about which there are a lot of educational courses offered and advised. So I think we can gain somewhat there."

Pharmacy technician 7, female: "But you notice when you did such course, that you are very enthusiastic in the beginning and tell everything. But it always fades a little bit."

On the other hand, it was mentioned a few times that pharmacy technicians lack sufficient practical knowledge. For instance, they do not realise the impact of eczema among children. Therefore, some problems like non-adherence or rigid creams and ointments, remain unidentified. Furthermore, motivating the parents is another practical skill that is important for pharmacy employees. It is the pharmacists' opinion that improving these practical skills would contribute to a better empathy and understanding of the problems that parents encounter. Furthermore, pharmacy technicians themselves wished for a more practical training, so that they would be better at conveying information and at motivating the parents.

Pharmacist 1, female: "I think that if the team knows more about the daily practice that parents deal with, that they will be better at imagining their situation. And therefore they will think more about the problems that parents encounter and will ask for it in a more targeted approach."

Moreover, in one pharmacy it was mentioned that they experienced that colleagues may provide different information to the parents. They suggested that it would be better if the parents were informed with identical instructions and advices.

Pharmacy technician 3, female: "It is of course important that in the whole pharmacy the same story is told. That is something that you see in practise. That colleagues say something a bit different than you. That is not wrong, but it is nicer if you can all tell the same story."

4.6 INITIATIVES AND SUGGESTIONS FROM PHARMACIES

Some of the pharmacies have started a project to improve the pharmaceutical care for patients with eczema. For example, one pharmacy created two sample sets with two or three different moisturisers for the patients to test. A basic set for normal skin and another set for dry skin was available. Then patients could buy the cream or ointment who is the most comfortable to use. Another pharmacy began a similar initiative, where

they gave patients the opportunity to try all the available moisturisers. More precisely, they had a basket with different samples of moisturisers, so patients could choose which one they prefer.

Besides these initiatives, some pharmacy employees gave some interesting suggestions to improve the pharmaceutical care for children with eczema. First of all, many pharmacy employees emphasised the importance of moisturisers. They wished for more attention to recommending moisturisers.

Pharmacy technician 10, female: "I think that moisturisers, the ointments, that they cannot be forgotten."

A second suggestion that was brought up several times was to refer patients to reliable and clear websites, like apotheek.nl or thuisarts.nl. Furthermore, one pharmacy had done research about social media and digital information. They found out that parents would prefer to receive digital information. For instance, one pharmacist had the idea to send an e-mail with the referral to thuisarts.nl, after the first dispensing conversation for a topical corticosteroid.

Pharmacist 2, female: "I think the nicest would be if you send a mail during the first dispensing conversation to the patient, with the referral to thuisarts.nl."

Thirdly, one of the pharmacies had an educational and satisfying collaboration with the hospital and its dermatology nurses. One of the employees of this pharmacy saw parents and children who kept struggling with the treatment or for whom the treatment did not work, even though they had tried multiple therapies. Therefore, she suggested to refer those children and their parents to the hospital to follow a therapy and get support from the dermatology nurses. Moreover, the pharmacy team received a training from the dermatologist and dermatology nurses. Due to this, they gained more experience and recommend this for more pharmacies.

Pharmacy technician 9, female: "And they already have tried almost everything and they get hopeless. [...] Actually, those people should be referred to the hospital, so that they can follow a therapy there."

Furthermore, one pharmacist came with the idea to organise a training for parents. In this way, they could learn more about the disease and what factors can cause exacerbations. Additionally, the importance of applying cream consequently should be emphasised in this course.

Pharmacist 6, female: "Perhaps also a training for parents. To get aware of: 'What is eczema? What are triggers of eczema?' But also: 'What about the treatments and how important it is to apply it good.'"

A few interviewees recommended to create something for the children themselves with images. For instance, a pharmacy technician suggested to create a small book with images for children, so they can understand their daily routine. With this in mind, children would learn what it means to have eczema and they would be motivated to keep up with the treatment and other practical advices.

Pharmacy technician 11, female: "Some kind of small book. With images of the daily routine of waking of, applying creams. Showering, so you can take that in account. And also that you apply the creams just before going to sleep."

Finally, one interviewee proposed to write a flyer or folder with an overview of more detailed, but also easier information about topical corticosteroids. She suggested to go through it with the patient during a first dispensing conversation.

Pharmacy technician 2, female: "Some more information and some easier information perhaps. And that you can take it quickly with you."

5 DISCUSSION

5.1 GENERAL DISCUSSION

The objective of this study was to determine the problems that pharmacy teams encounter in the counselling of young children with eczema. First of all, pharmacy employees noticed drug related problems, primarily non-adherence and corticosteroid phobia. This is in line with Krejci-Manwaring et al., who showed adherence to topical corticosteroids to be approximately 32%, which is remarkably low. Moreover, adherence increased when patients were close to the next consultation [30]. One of the participating pharmacists mentioned that patients kept struggling with the treatment due to a lack of follow-up consultations at the GP. Therefore, it might be a good solution to organise follow-up consultations for patients, so they are guided and motivated to maintain the treatment.

Furthermore, the interviewees mentioned that parents experienced corticosteroid phobia, due to their fear for possible side effects in their children. Studies estimated that about 40 to 73% of patients and parents of patients with eczema experience anxiety [27,33-35]. Obviously, this fear is one of the reasons that can lead to non-adherence. Besides follow-up consultations, a pharmacist suggested to organise an training for parents, in order to emphasise the importance of treating consistent and to lose their anxiety for using topical corticosteroids.

Not only the parents of children, but also pharmacy employees may experience fear or reluctance of using corticosteroids. In accordance with the study from Raffin et al., some pharmacy employees in this study were unwilling to use topical corticosteroids themselves or for their children. This negative attitude can influence their counselling of patients and potentially fuels patients' fear of applying topical corticosteroids. Furthermore, the study from Raffin et al. indicates that an education from a dermatologist improves the knowledge and thus the attitudes of pharmacy employees [38]. For instance, one of the pharmacies followed a training by a dermatologist and was very satisfied about the collaboration with the hospital's dermatologists and dermatology nurses. This kind of collaboration may extend not only the basic theoretical knowledge, but may also improve the attitudes towards topical corticosteroids. Moreover, an insufficient practical knowledge was a frequent recurring problem. Both pharmacists and pharmacy employees stated that a more practical training could improve counselling and advices for patients. This training could include a course about the impact of eczema among children and a subsequent training to recognise the problems that parents encounter in the treatment. Furthermore, learning to motivate patients should also be included in this practical training, as motivating patients to maintain the treatment is essential to control the eczema symptoms.

Despite the fact that the KNMP promoted the FTU in 2013 [22], it is still not implemented in all pharmacies. Only seven interviewees mentioned to advise the parents to use these units. These seven pharmacy employees were spread over four pharmacies, so their remaining colleagues did not mention it in the interview, but probably used it as well. Nevertheless, this means that two out of six pharmacies did not utilize the FTU, even though they knew about its existence. Further, instructions like 'not too thin, but not too thick' were often given to patients. It is clear that these kinds of instructions are confusing for patients and consensus should be achieved. The most remarkable observation was that there were still a few interviewees who advised their patients to apply the topical corticosteroid thinly. Bewley indicated that messages like 'use sparingly' or 'apply thin' contributed to corticosteroid phobia [20]. Using the FTU could solve these problems and reassure parents about the right quantity to apply. This remarkable observation is another reason to organise trainings for pharmacy employees in order to clarify the right instructions.

Not only those pharmacy employees, but also GPs or dermatologists still delivered prescriptions with the instructions to apply thin. So removing instructions to apply thin and instead implementing the FTU could help to reduce the corticosteroid phobia and therefore improve fear related non-adherence. An important remark hereby is that the FTU should not only be advised in all pharmacies, but also when consulting the GP or dermatologist, so patients do not receive conflicting recommendations. To achieve consensus in correct advices, closer collaboration between the different caregivers should be accomplished. Furthermore, many pharmacy employees reported that patients often do not use a moisturiser or only hear about the use of it when they come into the pharmacy. Therefore, it would be better if the GP advised and prescribed a moisturiser, so they immediately receive full instructions and understand the complete treatment.

The interviews came up with some remarks on the provision of information. For instance, information was sometimes too complicated and patients were overwhelmed with information on the internet. Furthermore, they were looking for information on websites with unreliable information. Therefore, a referral to websites like thisarts.nl or apotheek.nl would direct patients to trustworthy information. These websites contain simpler information, specially written for patients and therefore understandable for everyone. Another problem with the provided information, is the tapering schedule that often is not dispensed. Because this schedule is very important to minimize the risk of side effects [2,23], it would be a good idea to provide the patient with not only an application, but also a tapering schedule for applying topical corticosteroids.

5.2 LIMITATIONS AND STRENGTHS

As this was an explorative study, we used a qualitative approach. A major strength of this study was the open-ending of the questions of the interview, and the possibility to ask follow-up questions for clarifications. Therefore, the interviewees could express their experiences and opinions in their own words, without a questionnaire that potentially could steer their answers. Nevertheless, this also implies that interviewees could give socially desirable answers.

Another strength of the study is that the pharmacies applied voluntarily. The reasons for their application could be for instance that they had deepened themselves in the topic, that they were interested in the intervention from the OKEE-study or that they already had carried out initiatives to improve the counselling. Their interest in the topic and motivation to participate could have resulted in a more extensive input for this study, which is desirable in an explorative study.

A disadvantage of the voluntarily application is that a selection bias cannot be ruled out. It is possible that the interviewed pharmacies noticed more problems than other pharmacies that were not involved in this study. It is also possible that other pharmacies were not interested or did not have time, even though they might have noticed more or other problems.

As this was a qualitative study, the extent of the mentioned problems is unknown. To give an idea about the frequency and importance of the reported problems, a quantitative study could be carried out. The sample size of eighteen pharmacy employees was relatively small, yet data saturation was reached. Furthermore, it might be possible that some problems are still unknown. For instance, parents might rather go to their GP than to the pharmacy if they experience problems, in which case pharmacy staff may be unaware of these problems. Also, it might be possible that parents just quit the treatment when having problems and do not come back to the pharmacy. These limitations were also mentioned by some pharmacy employees.

5.3 CLINICAL PRACTICE AND SUGGESTIONS FOR FUTURE RESEARCH

As determined in the results, the Finger Tip Unit was not implemented in every pharmacy that was included for this study. This is regrettable, because it is a comprehensible and universal measurement to apply the right amount of cream or ointment, which remains a widespread problem. Another simple and potentially more time efficient alternative could solve this problem. A pump system could also be simple to use and save time, possibly resulting in improved adherence. The concept would be similar to the FTU but instead of counting finger tips, the

number of pumps are counted. Of course this requires a universal amount per pump, so a pumping system with a universal flow rate should be developed. A scheme comparable to the FTU scheme should be created with the necessary pumps for each body part.

A disadvantage of this system is that the package will never be fully emptied and leftovers are stuck at the bottom of the flask. A possible solution for this could be to design a flask where you can twist the bottom upwards and each twist could be calculated as a universal amount.

The observations from the interviews emphasise the importance of proper theoretical knowledge and practical skills of pharmacy employees, to improve non-adherence and corticosteroid phobia. Therefore, it is of interest to develop a training for pharmacy employees, with theoretical information. But most of all, improving practical skills is required. To investigate the influence of this training, the attitudes and know-how of the pharmacy's staff before and after the training should be tested. Furthermore, it would be interesting to investigate the influence of follow-up consultations at the GP or trainings for parents on non-adherence and corticosteroids phobia. Additionally, it would be useful to explore if promoting moisturisers and a tapering schedule at the GP improves the severity of eczema and postpones the return of symptoms.

6 CONCLUSION

The most important problem that pharmacy employees encountered was non-adherence, possibly as a consequence of steroid phobia and lack of good instructions and information about the complete treatment. To resolve these problems, follow-up consultations or a training for parents could be organised. Furthermore, the co-operation between different caregivers should be improved, in order to provide the patient with consistent, clear and complete information and instructions.

At last, pharmacy employees have a crucial role in counselling parents of children with eczema. Therefore, it is important that this counselling is not influenced by their own prejudices about topical steroids. Furthermore, their instructions should be accurate to eliminate confusion and patients should be motivated to maintain the chronic treatment. But theoretical knowledge fades and practical skills can be insufficient. This requires training to extend their knowledge and skills, resulting in better attitudes and advanced motivating and conveying information to parents.

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8 APPENDICES

8.1 INTERVIEW PROTOCOL FOR PHARMACY EMPLOYEES

Part 1: Problems during the treatment of constitutional eczema with children

1. What kind of problems do you notice with the treatment of constitutional eczema in children?
 - a. Compliance problems?
 - b. Fear for side effects?
 - c. Practical problems?
 - d. How often do these problems occur?
2. How do you handle these problems?
3. What is your opinion about the use of topical corticosteroids in children with eczema?

Part 2: Collaboration with other caregivers like general practitioners

1. How is the collaboration with the general practitioner in the treatment of eczema?
2. Are there any agreements made with the general practitioner about the treatment of eczema in children?
 - a. For the pharmacist: Are there Pharmacotherapeutic Consultations organised?
 - b. Are there agreements about handling prescriptions?
 - c. Is there commonly information?

Part 3: Information that is given during the first dispensing conversation at the pharmacy

1. What kind of information is according to you important to give to the parents at the first dispensing conversation for topical corticosteroids for the treatment of eczema in children?
 - a. The use, possible side effects or additional information?
 - b. Why do you think this is important?
2. What kind of information is according to you important to give to the parents at the first dispensing conversation for a moisturiser for the treatment of eczema in children?
 - a. The use, possible side effects or additional information?
 - b. Which moisturiser do you recommend for children with eczema?
 - c. Why do you recommend this one?
 - d. What is your opinion about the use of a moisturiser?
3. What other advices do you give to parents of young children about the treatment of complaints due to the eczema?

4. What information is available in the pharmacy about eczema in children?
5. What is your opinion about alternative therapies, homeopathy, Chinese medicines?
6. Does the information at the first dispensing conversation of corticosteroids or moisturiser differ from young children (0-12 years) compared to adolescents (12-18 years)?

Part 4: Need for extra information about constitutional eczema for parents

1. What questions do you receive from parents about the use of corticosteroids for eczema in children?
2. What questions do you receive from parents about the use of a moisturiser for eczema in children?
3. What is your opinion about the available information for patients, like flyers, websites, about eczema in children?
 - a. What is good about it?
 - b. What could be better?
4. Do you notice that there is need for more or other information, specifically for parents of children with eczema?
 - a. Which information is necessary?
5. What is your recommendation to improve the provision of information for parents?

Part 5: Knowledge of pharmacy employees about constitutional eczema

1. For the pharmacist: How is the knowledge of the pharmacy team about the treatment of eczema in children?
 - a. What is going well?
 - b. What can be improved?
 - c. Which way is according to you the best to give extra information at the pharmacy team about the use of corticosteroids for children with eczema?
2. For the pharmacy employee: What knowledge of skills would you like to gather or improve to optimize the provision of information about eczema in children?
 - a. Do you feel the necessity for this?
 - b. Are there thing or points of attention we can't forget when we develop the intervention?
 - c. Through which way would you like to receive more information about the use of corticosteroids for children with constitutional eczema?
3. Do you have other suggestions to improve the current treatment of eczema in children?

8.2 CODING TREE FOR NVIVO

1. Problems

- Dealing with problems
- Drug related problems
 - Costs
 - Fear
 - No fear
 - No idea about adherence
 - No non-adherence
 - No practical problems
 - Non-adherence
 - Not knowing how to apply
 - Practical problems
 - Reluctant to therapy
 - Rigid and difficult to apply
 - Too greasy
- Opinion of pharmacy employees

2. Collaboration with other caregivers

- Agreements
- Bad collaboration
- Common information
- Collaboration with dermatologist
- Collaboration with general practitioner
- Collaboration with dermatology nurses
- Good collaboration
- Pharmacotherapeutical consultations
- Prescriptions

3. Provision of information

- Alternative therapies
- Extra information
- First dispensing conversation
 - Effect
 - How long to apply
 - How much to apply
 - How often to apply
 - Possible side effects
 - Practical advices
 - Shelf life
 - Standard first dispensing conversation
 - Where to apply
- Information for young children vs. adolescents
- No extra information

- Recommendation greasy cream or ointment
 - Reason
 - Type
- Referral to website

4. Need for information for patients

- Need for more information
 - Need for more
 - No need
- Opinion about available information
- Questions from parents
 - Effect
 - Harmful
 - How long
 - How much
 - How often
 - No questions
 - Side effects
 - Where

5. Knowledge and skills of the pharmacy team

- Insufficient
- Methods for training
- Need for training
- Practical knowledge
- Sufficient
- Theoretical knowledge

6. Pharmacy employees

- Pharmacist
- Pharmacy technician

7. Corticosteroids

8. Greasy creams or ointments

9. Initiatives

10. Remarkable quotes

11. Suggestions

