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# Approaches of Management of Eczema in Primary Care

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***Abstract:*** **Our aim from this present study was to evaluate the management approaches of atopic Eczema (AE) in primary care, discussing the diagnostic approaches and steps of treatment procedures. Electronic databases; MEDLINE, EMBASE and The Cochrane Library databases were searched up to January 2017 to identify relevant studies discussing the atopic Eczema (AE) in Primary care, using following Mesh terms: "atopic Eczema" OR "Dermatitis" Combined with "family medicine" OR "Primary care" OR "family Practice". Family doctor play a main role in the management of AD, be it by referring patients with moderate-to-severe AD for specialized care, giving continuous maintenance care after assessment by experts, or handling patients with mild or extra anecdotal AD themselves. Atopic eczema is a chronic, upsetting skin problem that has a considerable impact on patients and their family members. Education and learning and patient support is therefore essential to its effective management. First-line therapy entails routine application of moisturizers and also periodic use topical steroids to settle flares.**

***Keywords:*** **atopic Eczema (AE), diagnostic approaches, primary care, MEDLINE, family Practice.**

## 1. INTRODUCTION

Atopic eczema (AE) which likewise called Atopic dermatitis (AD), is a common chronic inflammatory skin disorder. The reason for atopic eczema is complicated and not completely understood. Both environmental and genetic factors are most likely to contribute, with defects in epithelial barrier function arising from problems in structural proteins such as filaggrin making the skin both excessively permeable and more vulnerable to harm from environmental irritants and allergens [(1)]. The condition impacts both sexes similarly and usually start in the first months of life [(1)]. In 2009 - 2011, atopic dermatitis (AD) was estimated to affect 12.5% of children (0 - 17 years of age) in the United States, an increase of just over 5% since 1997- 1999 [(2)]. Amongst these patients, the large bulk (~ 67%) are reported to have mild disease [(3)] and as such might be properly handled by their pediatrician or another primary care physician. The majority of pediatricians refer even their mild patients to dermatologists (~ 85%) and provide only initial, minimal care (81%) [(4)]. Whether or not patients are referred to dermatology, pediatricians and family practitioners continue to play a central function in patient management for regular follow-up, upkeep treatment, continuous patient/caregiver education, and as the first-line contact for flares and problems, such as secondary staphylococcal infection [(4)]. Depending on disease seriousness, atopic eczema may have a substantial adverse impact on the lifestyle of afflicted individuals (eg through sleep disturbance) and their families. Atopic eczema might negatively affect a child's psychological and social advancement and may incline to mental problems [(5,6)].

Childhood eczema is very common, impacting over 20% of children aged five or under eventually [(7)]. Eczema normally starts before the age of 4 years and in 75% of cases clears by the teenage years, although relapses might take place. Eczema can trigger considerable distress to the child and family due to sleep disturbance and itch [(8)]. Primary care professionals can do a good deal to assist households gain control of eczema and decrease effect on quality of life by ensuring that they have a good understanding of ways to manage the condition when to re-consult [(7,8)].

Our aim from this present study was to evaluate the management approaches of atopic Eczema (AE) in primary care, discussing the diagnostic approaches and steps of treatment procedures.

## 2. METHODOLOGY

Electronic databases; MEDLINE, EMBASE and The Cochrane Library databases were searched up to January 2017 to identify relevant studies discussing the atopic Eczema (AE) in Primary care, using following Mesh terms: "atopic Eczema" OR "Dermatitis" Combined with "family medicine" OR "Primary care" OR "family Practice". In addition, the reference lists of identified articles were searched for more relevant studies to be involve in our review. Restriction language was applied to English published articles with human subject.

## 3. RESULTS

- **Diagnosis of Eczema in Primary care:**

Since there is no conclusive lab test, a medical diagnosis of AD is made based on a mix of clinical symptoms: pruritic dermatitis that is chronic and/or falling back with characteristic circulation (face, neck, and extensor surfaces in children and infants; flexural folds in patients of any age). Diagnosis is frequently made during an acute exacerbation of skin inflammation characterized by intensely pruritic, erythematous papules and spots accompanied by dry skin (ie, xerosis), excoriations, and in some cases serous exudate. The diagnostic criteria given in the AAD guidelines (**Table 1**) [(9)] supply an user-friendly set of criteria that mirror numerous lengthier verified requirements. A medical diagnosis of AD should just be made when other conditions have been ruled out such as irritant contact dermatitis, psoriasis, scabies, or a viral exanthem. A variety of scoring systems have been proposed for quantifying AD severity. Moderate disease generally includes less body area, has a more remittive course, and is related to lower strength itch [(10)]. Patients who can be maintained with basic management alone most often have mild disease. Patients with moderate-to-severe disease might have higher body area participation with more continuous course and more extreme itch [(10)].

There are numerous research studies documenting overall agreement between the medical diagnosis made by the primary care physicians (PCP) and the in person assessment with the dermatologist. The level of contract reported from such research studies ranged from 40% to 60%. All these research studies highlighted poor knowledge of dermatology in primary care service providers [(11,12)]. Further, research studies by Graells et al. and Porta et al. have actually reported higher diagnostic arrangement of 72% and 65.5%, respectively [(13,14)].

The present study reported a general agreement of 56% in between the primary care supplier and the dermatologist. The diagnostic contract in between medical care companies and remote skin specialists varied from 34.4% to 61% across different research studies [(15,16,17)]. Store-and-forward teledermatology likewise provided a high level of patient satisfaction, and worked in remote guidance and education of family doctors. In person assessments with the specialist were avoided in 69% of consultations [(17)]. Teledermatology has instructional worth for primary care providers too [(15)].

**Table 1: Diagnostic Criteria of atopic dermatitis [(9)]**

| Essential Features | Important Features | Associated Features |
|---|---|---|
| Both must be present | Add support to the diagnosis, observed in most cases of AD | Suggestive of AD, but too nonspecific to be used for defining or detecting AD in research or epidemiologic studies |
| **1. Pruritus** | **1. Early age of onset** | **1. Atypical vascular responses (eg, facial pallor, white dermographism, delayed blanch response)** |
| **2. Eczema (acute, subacute, chronic)** | **2. Atopy** | **2. Keratosis pilaris/pityriasis alba/hyperlinear palms/ichthyosis** |
| a. Typical morphology and age-specific patterns | a. Personal and/or family history | **3. Ocular/periorbital changes** |
| •Infants/children: facial, neck, and extensor involvement | b. IgE reactivity | **4. Other regional findings (eg, perioral changes/periauricular lesions)** |
| •Any age group: current or previous flexural lesions | 3. Xerosis | **5. Perifollicular accentuation/lichenification/prurigo lesions** |

| Essential Features | Important Features | Associated Features |
|---|---|---|
| •Sparing of the groin and axillary regions | | |
| b. Chronic or relapsing history | | |

- **Approaches to management of AE in primary care:**

Primary care physicians should utilize a stepped technique for managing atopic eczema in children. This suggests customizing the treatment action to the intensity of the atopic eczema. Emollients should form the basis of atopic eczema management and ought to always be used, even when the atopic eczema is clear. Management can then be stepped up or down, according to the seriousness of symptoms, with the addition of the other treatments noted in (**Table 2**) [10,15].

**Table2: Treatment options [10,15]**

| Mild atopic eczema | Moderate atopic eczema | Severe atopic eczema |
|---|---|---|
| Emollients | Emollients | Emollients |
| Mild potency topical corticosteroids | Moderate potency topical corticosteroids | Potent topical corticosteroids |
| | Topical calcineurin inhibitors | Topical calcineurin inhibitors |
| | Bandages | Bandages |
| | | Phototherapy |
| | | Systemic therapy |

Regardless of disease severity, fundamental management strategies need to be executed for each patient diagnosed with AD (**Figure 1**). These consist of appropriate skin care (ie, skin hydration and moisturizer used to all skin), antibacterial steps (ie, water down bleach baths), and trigger avoidance (general avoidance of irritants as recognized for each patient), with acute treatment added as required for flares (ie, acute escalation in signs and skin inflammation requiring an escalation in treatment and/or medical guidance) [18].

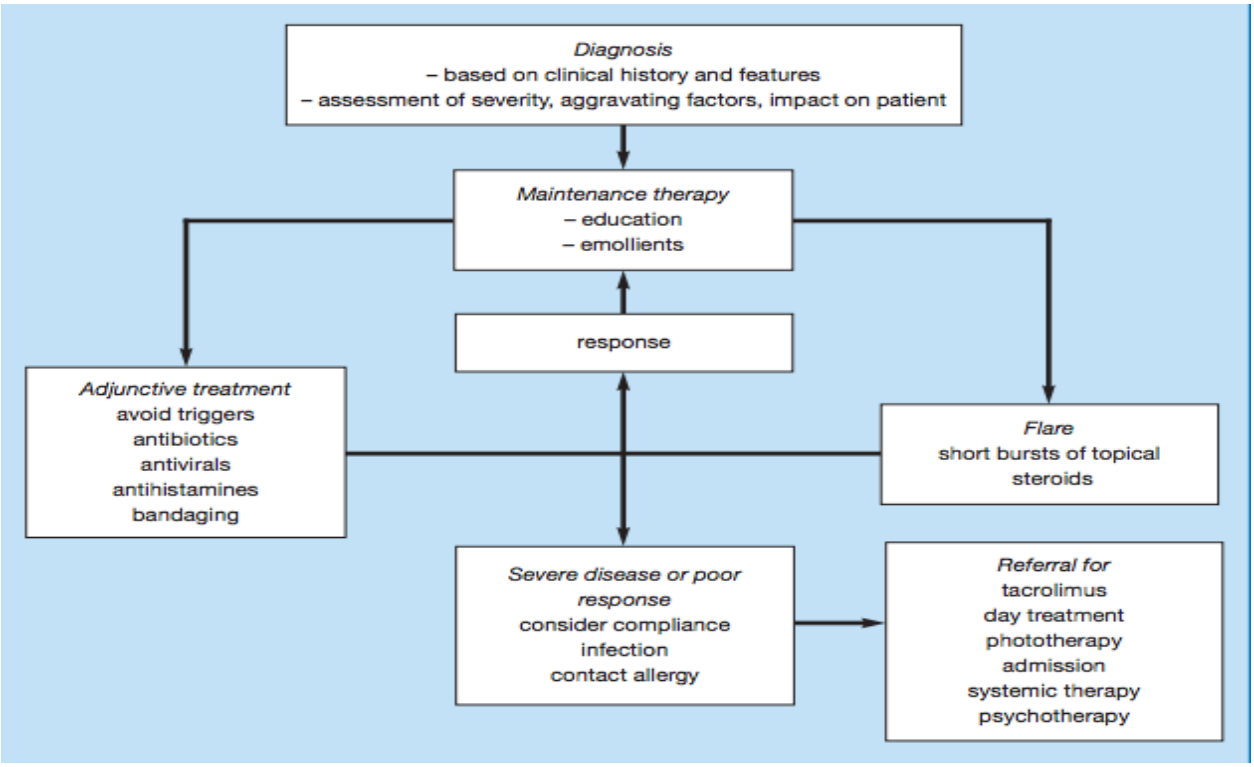


**Figure 1: treatment model/eczema action plan**

**Emollient therapy for atopic dermatitis:**

Effectiveness Emollients (moisturisers) soften the skin, aid in restoring the impaired barrier function of the skin, minimize the itch of dry skin, [19] increase the efficacy of topical corticosteroids [20,21] and have a steroid sparing action [22]. Emollients change the natural surface area oils which tend to lack AE and which are important both in avoiding irritant products, infection and allergy-inducing compounds from getting in the skin and water from leaving the skin. Although long term emollient treatment is considered the essential of dealing with atopic eczema, an organized evaluation conducted in 2000 did not recognize any high quality clinically pertinent proof in support of emollient monotherapy [23]. Professional opinion (from a medical guideline for children however applicable to adults) supports using emollients in the treatment of atopic eczema to bring back the malfunctioning skin barrier. It recommends that healthcare specialists provide a range of emollients permitting selection of the most appropriate to the patient, and that prescriptions need to be examined regularly [1]. (**Table 3**) summarize the types of emollient products available for family physicians to provide it to patients with AE in primary care practice.

**Table 1: Types of emollient products**

| Type | Description |
|---|---|
| Emollient creams and ointments | These products are designed to be left on the skin. |
| | Creams soak into the skin faster than ointments. |
| Emollient soap substitutes | These products contain emollient ingredients with |
| | very mild emulsifiers. They are used instead of soap and other detergents. |
| Emollient semi-dispersing bath oils | These contain oils and emulsifiers that disperse the oil in the water. This combination has a cleansing effect if gently rubbed over the skin. |
| Non-dispersing emollient bath oils | These products contain oils with no emulsifying agent. The oil forms a layer on the surface of the water which is deposited on the skin on getting out of the bath. |
| Adjuvant emollient products | Some emollient products contain additional ingredients such as antipruritics and antiseptics. |

**Topical steroids for treatment of AE in primary care:**

Topical steroids are a first-line treatment for settling the inflammation of an eczema flare [24]. Inadequate usage of topical steroids is a typical problem due to issues concerning side-effects from both patients and doctors. Cutaneous side-effects such as skin thinning, striae, telangiectasia and bruising need to only accompany inappropriate long-lasting use of too expensive a potency. There is very little risk with moderate and moderate steroids. Skin thinning invisible to the eye but noticeable by ultrasound is shown in healthy volunteers with twice-daily powerful and really powerful steroids for 6 weeks, although it is reversible at this phase [25]. In children, suppression of the pituitary adrenal axis and stunting of development is an issue, however long-term use of moderate and mild topical steroids does not generally impact pituitary-adrenal function (26). There is evidence that the 'more recent' powerful steroids such as fluticasone propionate (Cutivate) and mometasone furoate (Elocon) are quickly metabolised and have actually lowered potential for systemic side-effects [27]. Other unfavorable effects include burning, stinging, folliculitis, perioral dermatitis, acne, rosacea, allergic reaction and hypertrichosis to the steroid or other constituents of the creams. It is important to educate patients about the various steroid strengths. In order to reduce sideeffects, the mildest steroid likely to be efficient ought to be utilized. Mild-potency steroids are suggested in children, where the area for absorption is high; if control of the eczema needs frequent use of a reasonably potent corticosteroid, then referral ought to be thought about [28]. Mild steroids are also recommended in grownups and children for locations where the skin is thin or occluded such as the face, genital areas and flexures. The eyelids ought to be treated with caution due to the risk of cataracts and glaucoma. Alternatively, the soles and palms may require very potent or potent steroids as the thick skin lowers penetration of the steroid. Generally, ointments are more efficient than creams, as the emollient action and occlusive effect leads to better penetration. Ointments also need less preservatives so the potential for irritant and allergic reactions is lower. The British Association of Dermatologists recommends utilizing topical steroids for 10-14 days when the eczema is active, followed by 'vacations' with just emollients. The National Prescribing Centre recommends that steroids be used in bursts of 3 to seven days to deal with exacerbations. A potent steroid for 3 days is as safe and reliable as using a mild steroid for a week in mild-moderate eczema in children [29].

## 4. CONCLUSION

Family doctor play a main role in the management of AD, be it by referring patients with moderate-to-severe AD for specialized care, giving continuous maintenance care after assessment by experts, or handling patients with mild or extra anecdotal AD themselves. Atopic eczema is a chronic, upsetting skin problem that has a considerable impact on patients and their family members. Education and learning and patient support is therefore essential to its effective management. First-line therapy entails routine application of moisturizers and also periodic use topical steroids to settle flares.

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