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DHA TELEHEALTH CLINICAL GUIDELINES

FOR VIRTUAL MANAGEMENT OF

ATOPIC DERMATITIS - 12

Issue date: 27/07/2021

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Health Policies and Standards Department

Health Regulation Sector (2021)

INTRODUCTION

Dubai Health Authority (DHA) is the responsible entity for regulating, licensing and monitoring health facilities and healthcare professionals in the Emirate of Dubai. The Health Regulation Sector (HRS) is an integral part of DHA and was founded to fulfil the following overarching strategic objectives:

Objective #1: Regulate the Health Sector and assure appropriate controls are in place for safe, effective and high-quality care.

Objective #2: Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high-quality service delivery system.

Objective #3: Direct resources to ensure happy, healthy and safe environment for Dubai population.

ACKNOWLEDGMENT

This document was developed for the Virtual Management of Atopic Dermatitis in collaboration with Subject Matter Experts. The Health Policy and Standards Department would like to acknowledge and thank these professionals for their dedication toward improving the quality and safety of healthcare services.

The Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

Telehealth is based on Evidence Based Practice (EBP) which is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence and guidelines from systematic research.

EBP is important because it aims to provide the most effective care virtually, with the aim of improving patient outcomes. As health professionals, part of providing a professional service is ensuring that practice is informed by the best available evidence.

This guideline is presented in the format comprising of clinical history/symptoms, differential diagnosis, investigations and management. Identification of 'Red Flags' or serious conditions associated with the disease is an essential part of this telehealth guideline as it aids the physician to manage patients safely and appropriately by referrals to ER, family physicians or specialists for a face to face management.

The terms "dermatitis" and "eczema" are frequently used interchangeably. When the term "eczema" is used alone, it usually refers to atopic dermatitis (atopic eczema). "Eczematous" also connotes some scaling, crusting, or serous oozing as opposed to mere erythema. The term "dermatitis" is typically used with qualifiers (e.g., "contact dermatitis") to describe several different skin disorders.

Eczematous dermatoses are common, representing approximately 10 to 30% of dermatologic consultations across different populations and ethnic groups. Specific types of eczematous

dermatitis are more common in some age groups. As an example, atopic dermatitis is far more common in children than in adults, whereas asteatotic eczema and nummular eczema are typically seen in older adults.

DEFINITIONS/ABBREVIATIONS

Virtual Clinical Assessment: Is the evaluation of the patient's medical condition virtually via telephone or video call consultations, which may include one or more of the following: patient medical history, physical examination and diagnostic investigations.

Patient: The person who receives the healthcare services or the medical investigation or treatment provided by a DHA licensed healthcare professional.

ABBREVIATIONS

ACD	:	Allergic Contact Dermatitis
AKC	:	Atopic Keratoconjunctivitis
DHA	:	Dubai Health Authority
EBP	:	Evidence Based Practice
ER	:	Emergency Room
FLG	:	Filaggrin Gene
MRSA	:	Methicillin-Resistant S. Aureus
PUVA	:	Psoralen, Ultra, Violet and the A for that portion of the solar spectrum between 320 and 400 nanometers in wavelength

1. BACKGROUND

1.1. Most common types of eczematous dermatoses are:

1.1.1. Seborrheic Dermatitis

1.1.2. Atopic Dermatitis

1.1.3. Contact Dermatitis

1.1.4. Juvenile Plantar Dermatosis

1.1.5. Stasis Dermatitis

1.1.6. Asteatotic Eczema

1.1.7. Dyshidrotic Eczema

1.1.8. Nummular Eczema

1.2. Risk Factors

A family history of atopy (eczema, asthma, or allergic rhinitis) and the loss-of-function mutations in the filaggrin (FLG) gene, involved in the skin barrier function, are major risk factors for atopic. Approximately 70% of patients have a positive family history of atopic diseases. Children with one atopic parent have a two to threefold increased risk of developing atopic dermatitis and the risk increases to three to fivefold if both parents are atopic.

2. SCOPE

2.1. Telehealth services in DHA licensed Health Facilities.

3. PURPOSE

3.1. To support the implementation of Telehealth services for patients with complaints of Atopic Dermatitis in Dubai Health Authority (DHA) licensed Health Facilities

4. APPLICABILITY

4.1. DHA licensed physicians and health facilities providing Telehealth services.

4.2. Exclusion for Telehealth services are as follows

4.2.1. Emergency cases where immediate intervention or referral is required.

4.2.2. Prescribe Narcotics, Controlled or Semi-Controlled medications.

5. RECOMMENDATIONS

5.1. Virtual Clinical Assessment

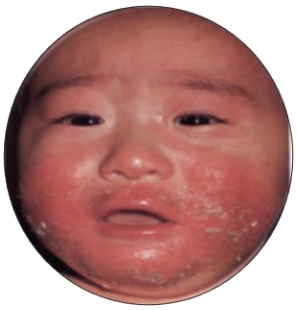
Atopic dermatitis is a chronic pruritic inflammatory skin disease that occurs most frequently in children, but also affects adults. Atopic dermatitis is often associated with elevated serum level of immunoglobulin E and a personal or family history of atopy, which describes a group of disorders that includes eczema, asthma, and allergic rhinitis.

5.1.1. Common Fetaures:

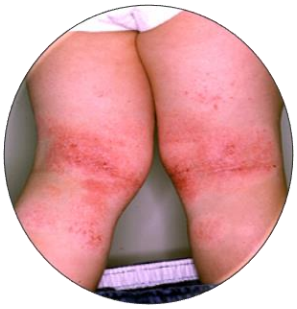
a. Dry skin and severe pruritus are the cardinal signs of atopic dermatitis. However, the clinical presentation is highly variable, depending upon the patient's age and disease activity.

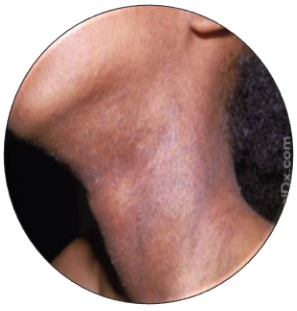
b. Acute eczema is characterized by intensely pruritic erythematous papules and vesicles with exudation and crusting, whereas subacute or chronic lesions present as dry, scaly, or excoriated erythematous papules. Skin thickening from chronic scratching and fissuring may develop over time. In many patients, lesions in different stages may be present at the same time.

c. In infants and young children (zero to two years) - atopic dermatitis typically presents with pruritic, red, scaly, and crusted lesions on the extensor surfaces and cheeks or scalp. There is usually sparing of the diaper area. Acute lesions can include vesicles, and there can be serous exudates and crusting in severe cases.



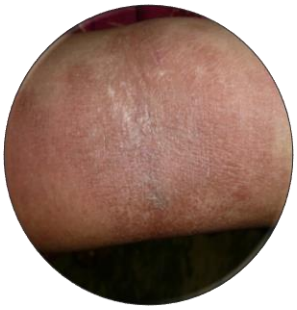
d. In older children and adolescents (2 to 16 years) - atopic dermatitis is characterized by less exudation and often demonstrates lichenified plaques in a flexural distribution, especially of the antecubital and popliteal fossae, volar aspect of the wrists, ankles, and





neck. The sides of the neck may show a reticulate pigmentation, the so-called "atopic dirty neck".

e. In adults - atopic dermatitis is considerably more localized and lichenified. The areas involved are in most cases the skin flexures. Less frequently, the dermatitis may involve the face, neck or hands.



f. In all age groups, any area of the body can be involved in severe cases, although it is uncommon to see lesions in the axillary, gluteal, or groin area; lesions in these locations should prompt consideration of other diagnoses such as psoriasis, allergic contact dermatitis, or seborrheic dermatitis.

6. COMORBIDITIES

6.1. Allergic rhinitis

6.2. Asthma

6.3. Food allergy

6.4. Ichthyosis vulgaris

6.5. Eye diseases - atopic keratoconjunctivitis (AKC) and vernal keratoconjunctivitis

6.6. Psychiatric disorders — The association of atopic dermatitis with psychosocial distress and other psychiatric disorders may be influenced by the perceived disease

severity and other factors that affect negatively the quality of life, such as the loss of sleep, disabling pruritus, and social embarrassment.

7. RED FLAGS

7.1. Non-blanching rash in an unwell patient

7.2. Areas of rapidly worsening, painful eczema

7.3. Possible fever, lethargy or respiratory distress

7.4. Clustered blisters consistent with early-stage cold sores

7.5. Punched-out erosions (circular, depressed, ulcerated lesions) usually 1–3 mm that are uniform in appearance (these may coalesce to form larger areas of erosion with crusting)

7.6. Recurring infections

7.7. Spreading from broken skin (such as venous leg ulcers)

7.8. Recent tick bite (especially if in a known geographical risk area for Lyme disease)

7.9. Pregnancy

7.10. Psychosocial problems related to atopic eczema

8. DIAGNOSIS

8.1. The diagnosis of atopic dermatitis is clinical, based upon history, morphology and distribution of skin lesions, and associated clinical signs. This can be done by

8.1.1. Virtual video consultation

8.1.2. Viewing high resolution pictures sent by the patient

8.2. The clinical presentation will include:

8.2.1. Evidence of pruritic skin, including the report by a parent of a child rubbing or scratching.

8.2.2. History of skin creases being involved. These include: antecubital fossae, popliteal fossae, neck, areas around eyes, fronts of ankles

8.2.3. History of asthma or hay fever (or history of atopic disease in a first-degree relative for children <4 years of age)

8.2.4. The presence of generally dry skin within the past year

8.2.5. Symptoms beginning in a child before the age of two years. (This criterion is not used to make the diagnosis in a child who is under four years old)

8.2.6. Visible dermatitis involving flexural surfaces. For children under four years of age, this criterion is met by dermatitis affecting the cheeks or forehead and outer aspects of the extremities.

8.3. Laboratory testing and skin biopsy

Skin biopsy and laboratory testing, including IgE levels, are not used routinely in the evaluation of patients with suspected atopic dermatitis and are not recommended. However, in selected patients, patient should be referred to dermatologist for histologic examination of a skin biopsy or other laboratory tests (e.g., serum immunoglobulin E, potassium hydroxide preparation, patch testing, genetic testing) which might be helpful to rule out other skin conditions.

8.4. Diagnostic Criteria

History of an itchy skin condition, plus three or more of the following:

8.4.1. History of a rash in the skin folds

8.4.2. Visible flexural dermatitis

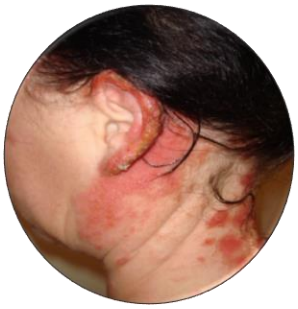
8.4.3. History of asthma or hay fever

8.4.4. History of generalized dry skin in the past year

8.4.5. Onset of rash under the age of two years

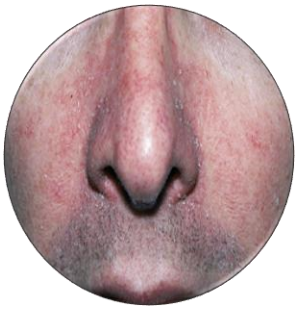
9. DFFERENTIAL DIAGNOSIS

9.1. Allergic or irritant contact dermatitis



Allergic or irritant contact dermatitis may be difficult to differentiate from atopic dermatitis. Moreover, allergic contact dermatitis may coexist with atopic dermatitis. The localization of dermatitis to a specific skin area, history of exposure to irritants or potential sensitizers, and a relevant patch test positivity (which will require a face to face consultation) suggest the diagnosis of contact dermatitis.

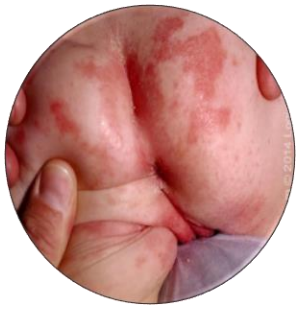
9.2. Seborrheic dermatitis



Seborrheic dermatitis is the most common differential diagnosis in infants. The two conditions may also coexist. The presence of salmon-red erythematous skin patches

with greasy scale, involvement of the scalp, and little or no pruritus support the diagnosis of seborrheic dermatitis.

9.3. Psoriasis



In contrast with atopic dermatitis, psoriasis presents with well-demarcated erythematous patches with little scale (in infants and young children, the diaper area is involved)

9.4. Scabies

Scabies may present as a diffuse eruption mimicking atopic dermatitis. The involvement of the skin folds (and, in infants, of the diaper area) and the presence of vesicopustules on the palms and sole suggest the diagnosis of scabies. The demonstration of mites or eggs by skin scraping, dermoscopy, or adhesive tape test can confirm the diagnosis which will require a face to face consultation.

9.5. Less common conditions that may be confused with atopic dermatitis include:

9.5.1. Drug induced dermatitis

9.5.2. HIV dermatitis

9.5.3. Photo-allergic and photo-irritant dermatitis

10. MANAGEMENT

10.1. Refer to APPENDIX 1 for the Virtual Management of Atopic Dermatitis Algorithm

10.2. The optimal management of atopic dermatitis requires a multipronged approach that involves the elimation of exacerbating factors, restoration of the skin barrier function and hydration of the skin, patient education and pharmacologic treatment of skin inflammation.

10.3. Elimination of exacerbating factors

10.3.1. Exacerbating factors in atopic dermatitis include:

a. Excessive bathing without subsequent miniaturization

b. Low humidity environments

c. Emotional stress

d. Dry skin

e. Overheating of skin

f. Exposure to solvents and detergents

10.3.2. Avoiding these situations is helpful for acute flares as well as for long-term management. Since atopic individuals tend to respond more readily to pruritic stimuli, anything that tends to induce itch in an individual should be avoided.

10.3.3. Adjunctive measures that can be useful in all patients with dermatitis include:

a. Avoid trigger factors such as heat, low humidity

b. Treat skin infections such as Staphylococcus aureus and herpes simplex

c. Use antihistamines for sedation and control of itching

d. Treat stress and anxiety

10.3.4. Contact allergens — Atopic individuals are at an increased risk for developing allergic contact dermatitis (ACD) to nickel as well as many components of topical treatments (e.g., fragrances, preservatives, neomycin). ACD should be suspected when patients do not respond to appropriate topical therapy or when affected areas continue to spread beyond the usual flexural locations.

10.4. Restoration of the skin barrier function and hydration of the skin

10.4.1. Emollients and moisturizers — Skin hydration is a key component of the overall management of patients with atopic dermatitis. Lotions, which have a high water and low oil content, can worsen xerosis (dryness) via evaporation and trigger a flare of the disease. In contrast, thick creams, which have a low water content, or ointments (e.g., petroleum jelly), which have zero water content, better protect against xerosis, but some patients may complain that they are greasy. To maintain skin hydration, emollients should be applied at least two times per day and immediately after bathing or hand-washing.

10.4.2. Emollients are best applied immediately after bathing when the skin is well hydrated.

10.4.3. Bathing practices — Warm soaking baths or showers using mild or soap-free cleansers should be part of the routine skin care for patients with atopic dermatitis. Application of emollients and/or prescribed topical preparations immediately after bath or shower is important.

10.4.4. Controlling pruritus

10.4.5. Oral H1 antihistamines are widely used as a therapeutic adjunct in patients with atopic dermatitis to alleviate pruritus. First-generation, sedating antihistamines (eg, diphenhydramine, hydroxyzine, and cyproheptadine) may be beneficial for patients with disturbed sleep secondary to itch, although optimal doses and length of treatment have not been determined.

10.4.6. The efficacy of second-generation, less sedating, H1 antihistamines, such as fexofenadine, cetirizine, or loratadine, as an adjunct to topical treatment in adults and children with atopic dermatitis remains uncertain, and their use should be limited to patients with concurrent symptoms of urticaria or allergic rhinitis Tepid baths to hydrate and cool the skin can also temporarily relieve itching. Wet dressings (wet wraps) help soothe the skin, reduce pruritus, reduce redness, débride crusts, and

limit access to the skin. Emollients are applied to the skin, and dampened cotton garments are worn over the affected area and covered with a dry garment.

10.5. Patient education

Patient education is an important component of the management of atopic dermatitis. There was also a significant improvement in subjective assessment of severity, itching behavior, and emotional coping.

10.6. Pharmacological treatment of skin inflammation

10.6.1. Initial treatment

Topically applied corticosteroids and emollients are the mainstay of therapy for atopic dermatitis. The choice of the corticosteroid potency should be based upon the patient's age, body area involved, and degree of skin inflammation. Topical calcineurin inhibitors may be an alternative to topical corticosteroids, in particular for the treatment of the face, including the eyelids, neck, and skin folds.

10.6.2. Topical corticosteroids

a. For patients with mild atopic dermatitis, we suggest a low potency corticosteroid cream or ointment (e.g., desonide 0.05%, hydrocortisone 2.5%). Topical corticosteroids are applied one or two times per day for two to four weeks. Emollients should be liberally

used multiple times per day in conjunction with topical corticosteroids. Emollients can be applied before or after topical corticosteroids

b. The face and skin folds are areas that are at high risk for atrophy with corticosteroids. Initial therapy in these areas should start with a low potency steroid , such as desonide 0.05% ointment. High potency topical corticosteroids are generally avoided in skin folds and on the face; however, limited brief use (five to seven days) of potent corticosteroids may produce a rapid response after which patients can be switched to lower potency preparations.

c. Maintenance therapy that includes intermittent use of a topical corticosteroid or a topical calcineurin inhibitor may help prevent relapse.

d. Long-term use of topical corticosteroids, especially high or super high potency preparations, on large body areas may lead to adrenal suppression. Other adverse effects include skin thinning, telangiectasias, folliculitis, and contact dermatitis.

10.6.3. Topical calcineurin inhibitors

a. Topical calcineurin inhibitors are nonsteroidal immune-modulating agents that, unlike topical corticosteroids, do not cause skin atrophy

or other corticosteroid adverse effects. They can be used as an alternative to topical corticosteroids for the treatment of mild to moderate atopic dermatitis involving the face, including the eyelids, neck, and skin folds.

b. Tacrolimus ointment and pimecrolimus cream are applied twice a day. Tacrolimus comes in two strengths; the 0.1% formulation is appropriate initial therapy for adults, and the 0.03% formulation is appropriate for children and for adults who do not tolerate the higher dose. In patients who do not tolerate tacrolimus because of burning or stinging, pimecrolimus may be better tolerated.

10.6.4. Long-term safety concerns:

a. Use these agents only as second-line therapy in patients unresponsive to or intolerant of other treatments.

b. Avoid the use of these agents in children younger than two years of age; clinical studies have found higher rates of upper respiratory infections in children younger than two years who were treated with pimecrolimus.

c. Use these agents only for short periods of time and use the minimum amount necessary to control symptoms; avoid continuous use.

d. Avoid the use of these agents in patients with compromised immune systems.

e. Crisaborole - It is a boron-based, small-molecule, topical phosphodiesterase 4 (PDE4) inhibitor for the treatment of mild to moderate atopic dermatitis.

10.7. Treatment of acute exacerbations

In adolescents and adults, an acute exacerbation of chronic atopic dermatitis can sometimes be aborted by a short course of systemic glucocorticoids (e.g., prednisone40 to 60 mg/day for three to four days, then 20 to 30 mg/day for three to four days). This strategy is not recommended for infants and young children.

10.8. Patients with moderate to severe Atopic dermatitis

These patients should be referred to dermatologist for further assessment and management which might include high potency steroid cream/ointment, oral cyclosporine and Ultraviolet light therapy (phototherapy) with PUVA

10.9. Management of infection

Patients with atopic dermatitis are at increased risk for cutaneous bacterial, viral, and fungal infections. Clinical signs of bacterial superinfection, most often from S. aureus, include:

10.9.1. Weeping

10.9.2. Pustules

10.9.3. Honey-colored crusting

10.9.4. Worsening of dermatitis

10.9.5. Failure to respond to therapy

10.9.6. The presence of vesicles and punched-out erosions may be a sign of eczema herpeticum.

10.10. Clinically infected skin

10.10.1. Because of the universal skin colonization with S. aureus in patients with atopic dermatitis, routine skin swabs for bacteriologic culture are not recommended. However, skin and nasal swabs may be useful for recurrent infection, infection that does not respond to treatment, or if there is concern about antimicrobial resistance or clinical suspicion of unusual organisms.

10.10.2. For patients with localized clinical infection, Mupirocin 2% cream is applied twice a day for one to two weeks. A prolonged use of topical antibiotics should be avoided because of the risk of inducing bacterial resistance. For patients with more extensive infection, we suggest oral antibiotic therapy with cephalosporins or penicillinase-resistant penicillins . Oral antibiotics are given for two weeks.

10.11. Clinically uninfected skin

Multiple observations indicate that in patients with atopic dermatitis without frank clinical infection there is a relationship between the epidermal density of S. aureus

and eczema severity or flare frequency. Since sodium hypochlorite 6% solution (liquid chlorine bleach) has activity against S. aureus, including methicillin-resistant S. aureus (MRSA), diluted bleach baths (obtained by adding 0.5 cup or 120 mL of 6% bleach in a full bathtub [40 gallons or 150 L] of lukewarm water, or one-half of a teaspoon of bleach in one gallon or four liters of lukewarm water) have been suggested as an adjunct to topical treatment between episodes of clinical infection to reduce the cutaneous load of S. aureus and improve symptoms.

10.12. Viral infections

10.12.1. Atopic dermatitis patients with lesions that are infected with herpes simplex (called eczema herpeticum or Kaposi's varicelliform eruption) should be treated immediately with oral antiviral therapy.

10.12.2. Skin with punched-out erosions, hemorrhagic crusts, and/or vesicle. Involved skin may be pruritic or painful, and lesions may be widespread. The diagnosis should be considered in patients who fail to respond to oral antibiotics

10.12.3. Patients with atopic dermatitis may also develop widespread molluscum contagiosum infections.

10.13. Fungal infections

10.13.1. Dermatophyte infections are more common in patients with atopic dermatitis, and can be treated with standard regimens of topical or oral antifungals.

10.13.2. In addition, the Malassezia furfur yeast (a normal component of skin flora) may be an exacerbating factor in patients with head/neck atopic dermatitis.

11. REFERRAL CRITERIA

11.1. Refer to Specialist

11.1.1. When patients have failed to respond to appropriate therapy

11.1.2. If treatment of atopic dermatitis of the face or skin folds with high potency topical corticosteroids is being considered

11.1.3. If treatment with systemic immunosuppressive agents is being considered

11.1.4. Atopic Dermatitis in immunocompromised patients

11.1.5. Patient with red flags

11.2. Refer to Family Physician

11.2.1. When the diagnosis is uncertain

11.2.2. If patient condition need medication requiring face to face consultation

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APPENDIX 1 – VIRTUAL MANAGEMENT OF ATOPIC DERMATITIS ALGORITHM