Family Practice Edition

Skin Therapy Letter ©

Volume 11 • Number 1 • October 2016

Clinical Evidence. Practical Advice

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Management of Chronic Hand Dermatitis: A Practical Guideline for the General Practitioner

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Introduction

Hand dermatitis (HD) can have a significant impact on quality of life of those affected. It may interfere with activities both at work and in the home and can be associated with social and psychological distress.[1,2] The chronic form, chronic hand dermatitis (CHD) affects up to 10% of the population, which can have a considerable societal impact.[2] Canadian Guidelines for the management of chronic hand dermatitis have been published to help guide management of this burdensome condition.[3] This article provides helpful practical guidance for the general practitioner in the management of patients with HD.

Abbreviations: CHD – chronic hand dermatitis; ENT – ear, nose, and throat; HD – hand dermatitis; KOH – potassium hydroxide; QoL – quality of life; TCI – topical calcineurin inhibitors; TCS – topical corticosteroid(s)

Diagnosing HD - Important points to cover:

- Determine if the patient has eczema, or a childhood history of eczema (erythematous, scaling patches with some fissuring in typical locations).
- Ask about a personal or family history of atopy, including asthma, seasonal ENT allergies, nasal polyps.
- Ask about a history of psoriasis and comorbidities such as psoriatic arthritis.
- Does the patient have occupational exposures that could lead to allergic or irritant contact dermatitis?
- Has the patient had any recent exposure to irritants? Frequent handwashing?
- Do a skin scraping for fungal KOH and culture to rule out *tinea manuum* as needed.

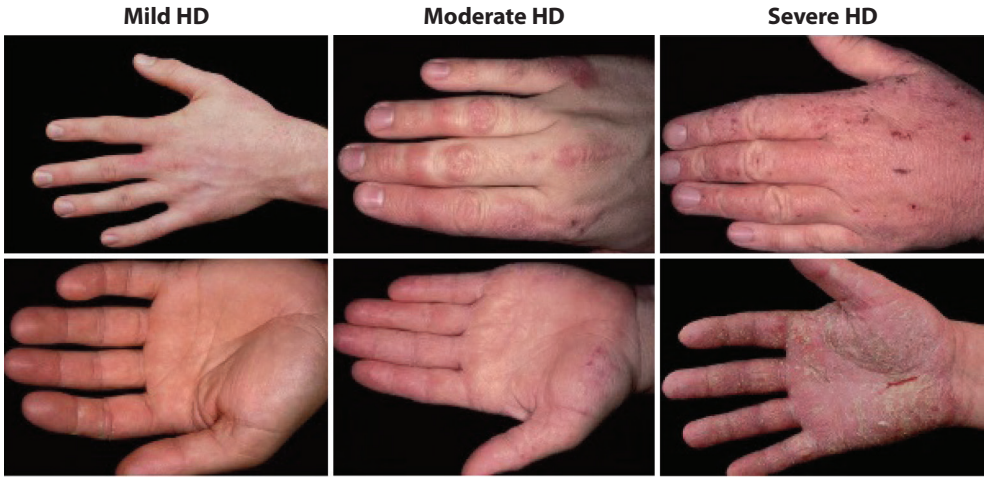

Figure 1. Examples of hand dermatitis(HD)

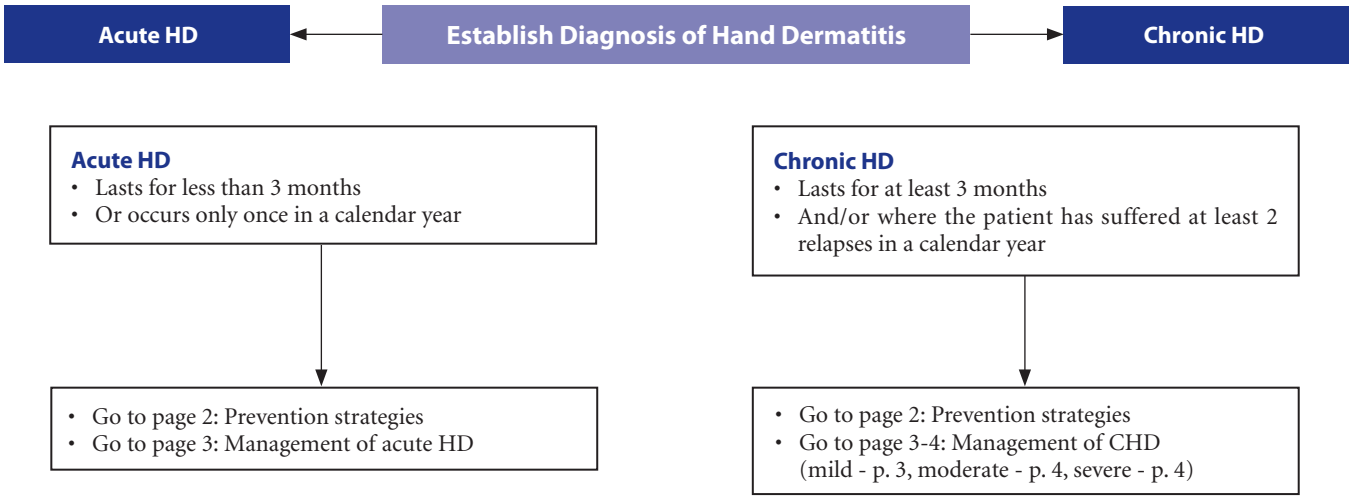

Figure 2. Establish diagnosis of acute hand dermatitis and chronic hand dermatitis (CHD). HD – hand dermatitis

Determining if HD is Acute or Chronic

- It is important to first differentiate between acute and chronic forms of HD, as the treatment options may vary.
- Acute HD lasts less than 3 months or occurs only once in a calendar year.
- CHD lasts for at least 3 months and/or patients experience at least 2 relapses in a calendar year.

Differential Diagnosis: Acute HD

- Dishydrotic dermatitis (pompholyx)
- Acute allergic contact dermatitis
- Irritant contact dermatitis
- *Tinea manuum*

Differential Diagnosis: Chronic HD

- Allergic contact dermatitis
- Irritant contact dermatitis
- Psoriasis
- *Tinea manuum*
- Cutaneous T cell lymphoma
- Bowen's disease

TIP: Could This Be Tinea?

- Check the feet for signs of *tinea pedis* and onychomycosis.
- Look for an active border suggestive of tinea.
- Take a skin scraping for KOH microscopy and culture.

TIP: Could This Be Psoriasis?

- Check the feet, scalp, elbows, knees, gluteal cleft and umbilicus for signs of psoriasis.
- Check the nails for signs of psoriasis: pitting, onycholysis, subungual hyperkeratosis, splinter hemorrhages, salmon patches (oil drops).

Prevention, Avoidance and Patient Education

- Every patient with HD, whether acute or chronic, should protect their hands and avoid irritants and exacerbating factors.
- Avoid wet work, frequent hand washing and alcohol-based hand sanitizers.
- Gloves should be worn to protect the hands: cotton gloves at home, or during the night; gel padded gloves for friction and protective gloves for wet work and irritant exposure.
- The following tips are provided for patients on what to use, what to avoid and helpful common practices.

Do	Don't
• Moisturize hands regularly with an emollient • Wear gloves when possible to protect hands • Keep fingernails trimmed and clean • Follow the treatment plan	• Rub, scratch or pick at loose skin • Wash hands or expose hands to water frequently (avoid wet work) • Expose hands to irritants: liquid hand soaps, disinfectants, shampoos, hand sanitizers

Assessing and Encouraging Patient Adherence

- Ask patients to bring products and prescriptions to follow up appointments to assess usage.
- More frequent patient follow up visits improve adherence.
- Provide education on the disease, treatment options and potential side effects of therapy.
- Choose treatment in agreement with the patient.
- Suggest joining a support group or organization, such as the Eczema society of Canada (http://www.eczemahelp.ca/en/index.html).

Emollient Therapy

- All patients with HD should use a bland, rich emollient to help restore the skin barrier, and apply frequently throughout the day.
- Regular application may prevent itching and reduce the number of flares.
- For hyperkeratotic eczema, patients should use an emollient with keratolytic agent (salicylic acid 10-20% or urea 5-10%).
- Unscented petroleum jelly is inexpensive and helpful for many patients.

Management of Acute HD

- It is important to make a diagnosis of acute HD so that treatment can be started as quickly as possible to maximize the outcome and prevent chronic involvement.
- Patients with HD should be adequately counselled on prevention and avoidance strategies.
- Avoidance of irritants, potential allergens and regular use of emollients is essential.
- Early treatment includes control of flares with a potent or super-potent topical corticosteroid (TCS) applied twice daily. For example, clobetasol propionate 0.05% ointment applied twice daily is generally effective in acute flares.
- For less severe flares, consider betamethasone valerate 0.1% ointment applied twice daily until controlled.
- In more severe cases, systemic steroids (prednisone, intramuscular triamcinolone) should be considered. Prednisone starting at 40-50 mg orally once a day and tapering over three weeks is an effective treatment course.
- Avoid short courses of prednisone as the condition may flare again, so a tapering dose is advised.
- Look for signs of infection and treat concomitantly.
- Try to identify any allergen exposures and recommend avoidance. If allergy is suspected, the patient should be referred for patch testing.
- Once controlled, consider maintenance therapy with topical calcineurin inhibitors (TCIs), such as tacrolimus 0.1% ointment twice daily when necessary, or twice weekly as maintenance therapy.

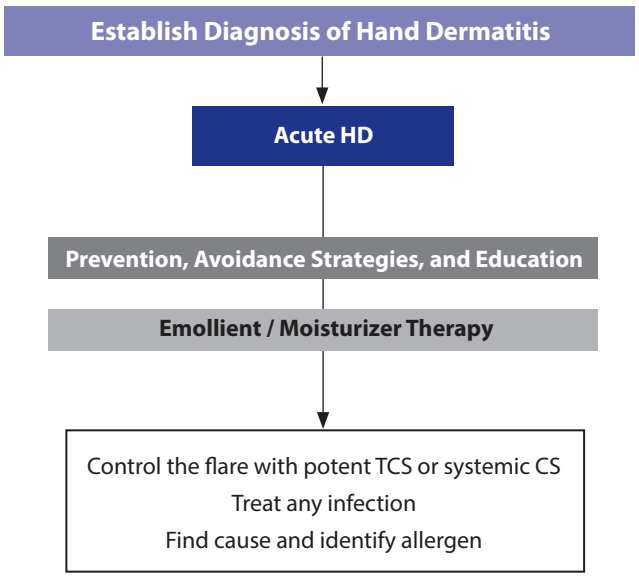

Figure 3. Severity-based treatment algorithm for the management of hand dermatitis (HD). CS – corticosteroid; TCS – topical corticosteroid

QoL Consideration

- Patients with mild or moderate CHD who have a significant impact on QoL should be managed as severe CHD.

Did You Know?

- Hydrocortisone topical agents should not be recommended for most cases of HD because it is rarely effective and patients may become sensitized.
- Hydrocortisone is responsible for the majority of allergies to topical steroid products.

Management of Chronic HD

- The treatment plan for CHD depends on whether it is mild, moderate or severe.

Management of Mild CHD

- Patients with mild CHD should be educated on proper prevention and avoidance strategies as outlined earlier.
- Regular emollient therapy should be used to restore and maintain the skin barrier.
- TCS therapy should be initiated with betamethasone valerate 0.1% ointment twice daily for 4-8 weeks.
- If not responding, adherence to the treatment plan should be assessed. Ask the patient to bring medication to follow up appointment to assess amount of product actually used.
- The patient can then be counselled on proper use of the product and provide support for ongoing management.
- If not responding with an adequate trial, a higher potency TCS, such as clobetasol priopionate 0.05% ointment should be prescribed as next line therapy. Reassess after 2 weeks. If not responding to an adequate trial of a potent or super potent TCS, the patient should be considered to have moderate CHD.

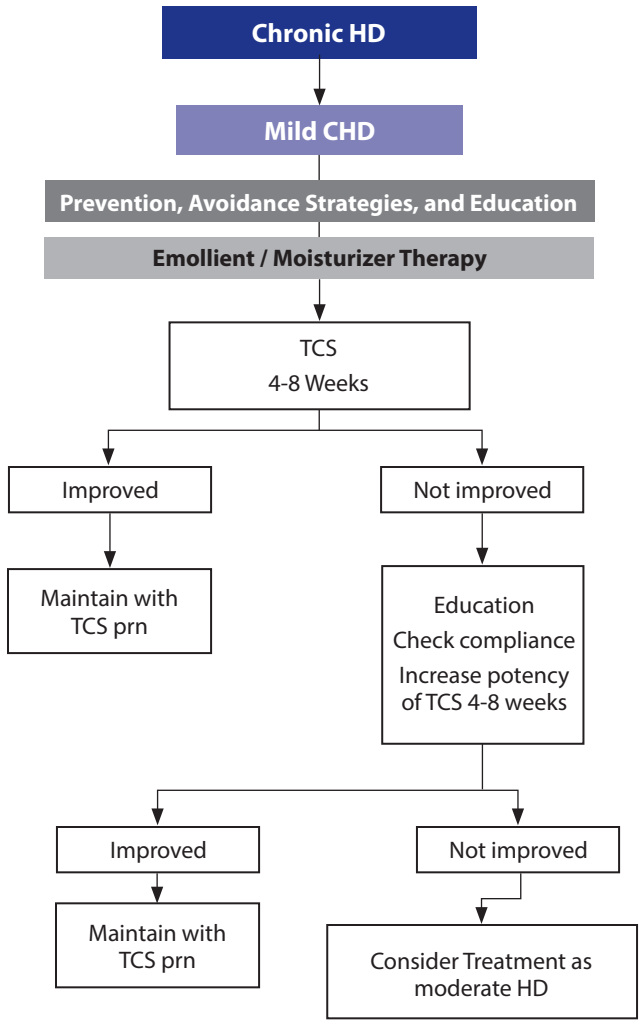

Figure 4. Treatment algorithm for the management of mild chronic hand dermatitis (HD). CHD – chronic hand dermatitis; TCS – topical corticosteroid

TIP: Always assess adherence, reconsider the diagnosis and rule out contact allergens, concomitant infection or colonization when patients do not respond to therapy.

Management of Moderate CHD

- In addition to regular use of emollients, patients with a diagnosis of moderate CHD should be given a 4-8 week trial of a moderate TCS, such as betamethasone valerate 0.1% ointment, or a super potent TCS, clobetasol propionate 0.05% ointment for a 2-week trial. If improved, the patient can continue this as necessary, for control of the condition.
- Another option is maintenance with a TCI, such as tacrolimus 0.1% ointment twice a day as needed, or twice weekly for maintenance. If not improved, reconsider the diagnosis and assess the patient for adherence.
- If a diagnosis of moderate CHD is confirmed, consider treating the patient with a course of phototherapy, if accessible. If unavailable or the patient does not respond, consider treating as severe CHD.

Safety Tip

When patients show signs of adverse effects to TCS, including atrophy or telangiectasias or they cannot tolerate topical steroid use, consider TCI (tacrolimus ointment 0.1%) as a non-steroid topical therapy option for treatment and maintenance.

When to Refer

- Patients with CHD should be referred to a dermatologist when:
  - They may require patch testing
  - They are not responding to therapy
  - Condition is worsening instead of improving
  - Require phototherapy

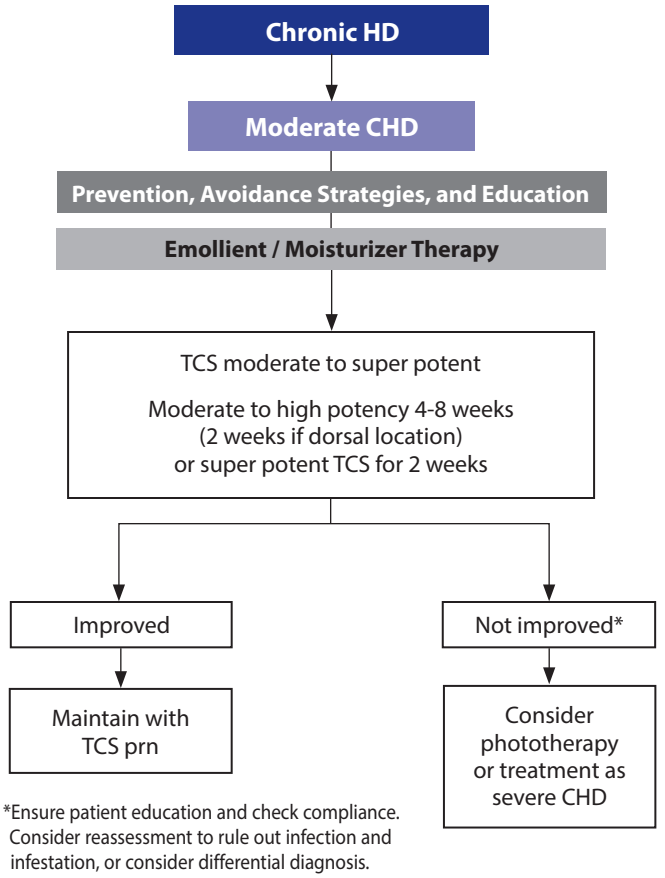

Figure 5. Treatment algorithm for the management of moderate chronic hand dermatitis (HD). CHD – chronic hand dermatitis; TCS – topical corticosteroid

Management of Severe CHD

- Patients who are diagnosed with severe CHD, patients with mild to moderate CHD who have failed an adequate trial on therapy, or patients who have a significant impact on the QoL, should be treated as having severe CHD.
- Treatment should be initiated with a potent or super-potent TCS, such as clobetasol propionate 0.05% ointment twice a day for 4-8 weeks (2 weeks on dorsal hands if super potent). If improved, patients may continue to use on an as needed basis, or switch to a TCI for ongoing maintenance therapy.
- Patients should be reassessed at 4-8 weeks. If they are not responding to therapy, consider adherence and review proper care.
- A course of phototherapy may also be considered if available.
- Treatment with oral alitretinoin (30 mg orally, once a day) is the next line of therapy based on best available evidence.[4] Alitretinoin should be prescribed by those who are comfortable with prescribing retinoids.
- As with all retinoids, caution should be used in females of child bearing potential due to teratogenic potential. Monitoring of therapy with regular blood tests for hepatotoxicity and alterations in lipid profile is also recommended.
- If the patient responds to therapy, it should be continued for 3-6 months and reassessed at that time. Patients may discontinue therapy at this point, and continue with ongoing maintenance with topical therapy. If, in the future, they experience a flare, they can be retreated with alitretinoin.[5]
- If a patient does not respond to 12 weeks of alitretinoin, they should be referred for confirmation of diagnosis and other treatment options, which would include treatment with immunosuppressive therapy such as cyclosporine, methotrexate, mycophenolate mofetil or azathioprine.

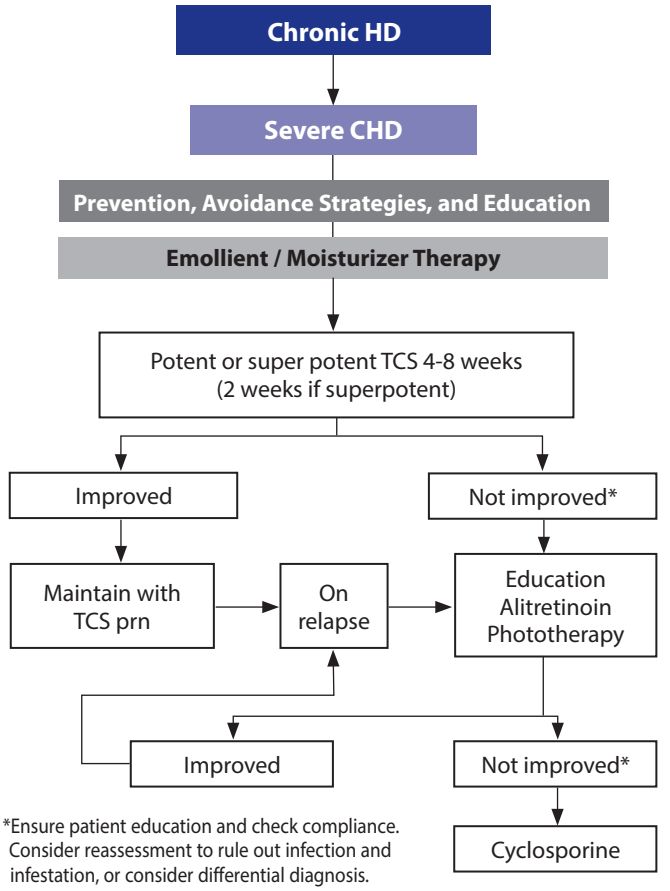

Figure 6. Treatment algorithm for the management of severe chronic hand dermatitis (HD). CHD – chronic hand dermatitis; TCS – topical corticosteroid

Drug Class Generic Name (Trade Name)	Level of Evidence	Summary
Acitretin (Soriatane®)	B	• Small scale single-blind RCT (n=29) showed efficacy of acitretin 30 mg OD[8]
Alitretinoin (Toctino®)	A	• Large scale, double blind RCTs showing superior efficacy compared to placebo in those refractory to TCS use • 48% patients 'clear/almost clear'[4] after 12-24 weeks
Cyclosporine (Neoral®)	B	• Small RCT showed low dose cyclosporine was as effective as betamethasone dipropionate[9]
Topical calcineurin inhibitor	B	• Small trials showing pimecrolimus and tacrolimus were slightly more[7] effective than vehicle but did not reach statistical significance • TCIs not indicated for use in CHD but can be steroid sparing
Topical corticosteroids	B	• Mainstay of topical therapy for CHD despite a paucity of well controlled trials • Efficacy proven in short term with relapse noted after discontinuation • Ongoing use with maintenance dosing is required to maintain benefit[6]

Table 1. Summary of evidence

Evidence levels:
A. Good-quality patient-oriented evidence, for example, large sized, double-blind, randomized clinical trials (RCTs)
B. Limited quality patient-oriented evidence, for example, small RCTs, non-controlled or observational studies
C. Other evidence, for example, consensus guidelines, extrapolations from bench research, opinion, or case studies

Conclusion

HD can have a significant burden on the patient with an impact on QoL. Early diagnosis of acute or chronic HD is important for optimal management. Other conditions such as *tinea manuum* and psoriasis need to be ruled out and managed appropriately. Once a diagnosis of HD is confirmed, treatment depends on the severity of the disease. A treatment algorithm has been developed to assist the general practitioner to make a diagnosis and either refer or treat accordingly. Whichever treatment option is prescribed, all patients should be educated on emollient therapy, hand protection and avoidance of irritants or allergens, which may be contributing to their disease.

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