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CASE AND RESEARCH LETTERS

Paraffin Wax Baths for the Treatment of Chronic Hand Eczema[☆]



Baños de parafina para el tratamiento del eccema crónico de las manos

To the Editor:

Hand eczema affects up to 15% of the adult population is a common cause of dermatologic consultation. It has a marked psychological and occupational impact, with mayor socioeconomic implications.^{1,2} Chronic hand eczema (CHE) is considered to exist when the lesions persist for more than 3 months or the patient presents more than 2 episodes in a year. Five clinical subtypes of CHE have been identified: hyperkeratotic, fissured, dyshidrotic, nummular, and pulpitis,² although overlap is common. CHE may arise on a background of atopic dermatitis, be caused by contact dermatitis (allergic or irritant), or be idiopathic.

Key factors in the management of CHE include the use of emollients and the investigation and avoidance of possible triggers. Numerous treatment options are available: topical corticosteroids and calcineurin inhibitors, phototherapy, oral retinoids, and immunosuppressants.¹⁻³ However, treatments must always be individualized.

Paraffin wax is a solid hydrocarbon derived from petroleum or coal. It is used in the food and textile industries, as well as in the manufacture of paper and of candles. The dermocosmetic industry also employs paraffin wax as a base for some emollients. The possibility to perform paraffin wax baths comes from the low melting point of this wax (approximately 37.5°C).^{4,5} Paraffin wax baths provide superficial heat, improving local blood flow and relieving pain⁶; they have traditionally been used in arthritis of the hands.⁷ Recently they have also been shown to improve post-traumatic rigidity of the hands⁸ and ankles⁵ and to be useful in the treatment of carpal tunnel syndrome.⁶ Paraffin wax baths have also been widely used in the dermocosmetic field in order to improve skin quality through their reparative effects on the skin barrier, acting as a very potent emollient. However, their use in CHE has not been reported in the literature.

We therefore undertook a study to determine the efficacy of paraffin wax baths in the treatment of CHE. Thirteen patients (5 men and 8 women) with hyperkeratotic or fissured CHE, pulpitis, or a combination of these conditions were selected. The mean age of the patients was 63 years. Treatment was performed exclusively with paraffin wax baths, 5 days a week for 4 consecutive weeks.

The device used for the treatment was a RehabMedic temperature-controlled bath measuring 36 × 26 × 18 cm, with an elliptical design and rounded borders (minimum required voltage, 220 V; mean power consumption, 150 W).

The treatment protocol was as follows:

1. Prepare the appropriate device and blocks of paraffin wax (Fig. 1A).
2. Cut the paraffin wax blocks into appropriately sized cubes to be introduced into the tank (Fig. 1B).
3. Set the thermostat to 35-40°C (Fig. 1C).
4. Wait 90-120 minutes for the paraffin to melt, and confirm that the temperature is optimal for the patient's hands to be introduced (Fig. 1D).
5. Submerge 1 hand completely for 3 to 4 seconds and withdraw. Repeat this procedure 5 to 8 times until a film of paraffin wax covers the hand, forming a white glove (Fig. 2A). Repeat the procedure with the other hand. If the device is of sufficient size, both hands can be treated simultaneously (Fig. 2B).
6. Maintain both hands in sealed plastic bags for 15 to 20 minutes (Fig. 2C).
7. Remove the paraffin wax glove (Fig. 2D).

Evaluation was performed at the end of the complete treatment cycle using the DermaSat questionnaire, validated by the Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC)⁹; this questionnaire evaluates patient satisfaction after the treatment.

The results are shown in Table 1. Efficacy was considered very good or good in 46% and 54%, respectively. Similar results were observed for comfort and medical follow-up. Impact on the quality of life was considered very positive in 30%, positive in 53%, and fair in 15%. No significant side effects were detected, but 51% of patients considered time consumption to be significant. The overall opinion of the patients was very good in 54% and good in 46%.

We believe that these results are very promising, taking into account the good risk-benefit relationship. Furthermore, the impact of the time required to perform the procedure could be reduced by home treatment after training at our center, adapting the protocol to the needs of each

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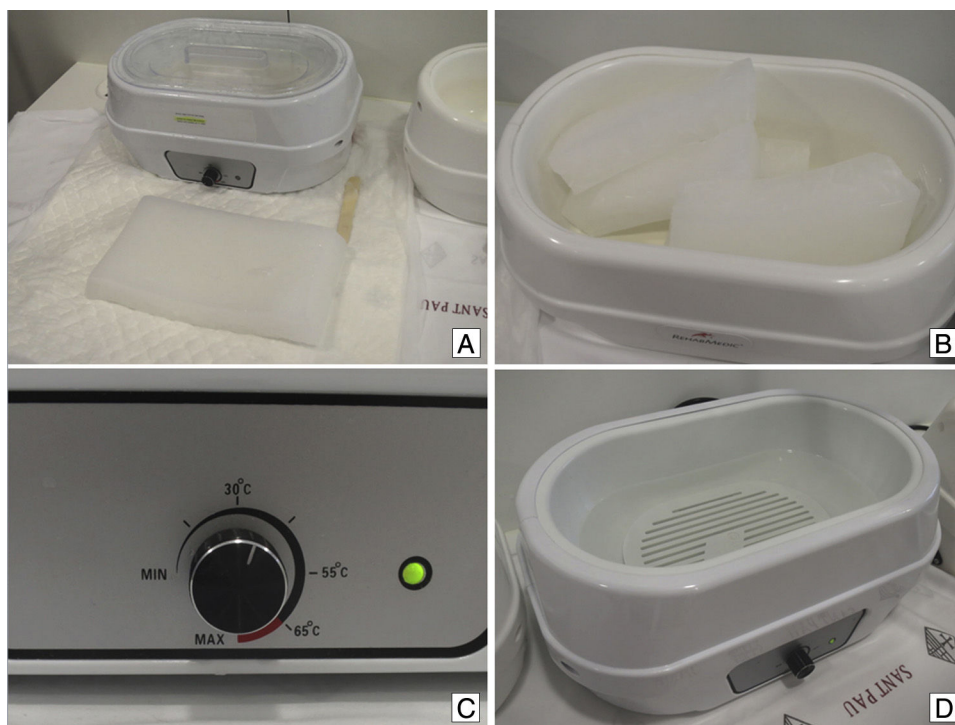


Figure 1 A, Device and paraffin wax blocks. B, The paraffin wax cut into cubes and placed into the device. C, Temperature around 35°C. D, Liquid paraffin after melting.



Figure 2 A, Introduction of the hands into the device with the liquid paraffin. B, The hand is removed from the tank and the procedure repeated until the paraffin coats the hand like a glove. C, The hands are inserted into plastic bags for 15 to 20 minutes. D, Remove the paraffin wax.

Table 1 Series of Patients Treated With Paraffin Baths.

	Sex	Age	Eczema Subtype	Etiology	Time Since Onset, y	Previous Treatments	Efficacy	Comfort	Impact	Monitoring	Adverse Effects	Overall Opinion
1	F	52	Hyperkeratotic/ fissured	AD	> 5	Emollients, topical CS, CI, CsA	Excellent	Good	Excellent	Excellent	Fair	Excellent
2	M	74	Pulpitis	Idiopathic	> 5	Emollients, topical CS, CI, PUVA	Excellent	Excellent	Good	Excellent	Fair	Good
3	M	72	Hyperkeratotic/ fissured	Idiopathic	< 1	Emollients, topical CS	Good	Excellent	Excellent	Excellent	Excellent	Excellent
4	F	36	Hyperkeratotic/ fissured	ICD	< 1	Emollients, topical CS	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
5	M	70	Pulpitis	Idiopathic	> 5	Emollients, topical CS, PUVA	Good	Good	Good	Excellent	Fair	Good
6	M	58	Hyperkeratotic	Idiopathic	< 1	Emollients, topical CS, PUVA, retinoids	Good	Good	Good	Fair	Good	Good
7	F	62	Hyperkeratotic/ fissured	ICD	> 5	Emollients, topical CS, PUVA, MTX	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
8	M	85	Hyperkeratotic/ fissured	Idiopathic	> 5	Emollients, topical CS, PUVA, MTX, retinoids	Good	Poor	Good	Good	Good	Excellent
9	F	82	Pulpitis	Idiopathic	> 5	Emollients, topical CS	Excellent	Excellent	Good	Excellent	Fair	Good
10	F	72	Hyperkeratotic	Idiopathic	> 5	Emollients, topical CS, CI	Good	Excellent	Fair	Good	Good	Excellent
11	F	63	Hyperkeratotic/ fissured	Idiopathic	1 – 5	Emollients, topical CS, CI	Good	Excellent	Fair	Good	Fair	Good
12	F	52	Hyperkeratotic/ fissured	Idiopathic	1 – 5	Emollients, topical CS, PUVA, retinoids	Good	Fair	Good	Excellent	Excellent	Good
13	F	45	Hyperkeratotic	Idiopathic	> 5	Emollients, topical CS, CI, PUVA, retinoids	Excellent	Good	Good	Excellent	Excellent	Excellent

Abbreviations: AD, atopic dermatitis; CI, Calcineurin Inhibitors; CS, corticosteroids; CsA, Cyclosporin A; F, female; ICD, irritant contact dermatitis; M, male; MTX, methotrexate; PUVA, psoralen-UV-A.

patient and each moment in time. We realize that this is a preliminary study with significant limitations, but we consider it to be an very positive initial approximation on which to base more complex studies that could elevate the level of evidence of the treatment and thus, in the future, introduce this procedure into CHE treatment algorithms.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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Trichomycosis Axillaris: Clinical, Wood Lamp, and Dermoscopic Diagnostic Images[☆]



Trichomycosis axilar: diagnóstico en imágenes, clínica, luz de Wood y dermatoscopia

To the Editor:

Trichomycosis axillaris, also called trichobacteriosis or trichomycosis palmellina, is a common skin infection caused by bacteria of the genus *Corynebacterium* spp., particularly *Corynebacterium flavescens*. It typically affects hair of the axillas, although it can also occur in pubic and perianal hair and, very rarely, scalp hair.

The prevalence is highest in tropical countries, with a warm and humid climate. Excessive sweating, inadequate hygiene, and not shaving the area favor its appearance. The condition is observed most often in young adults, and is more common in men than in women.^{1,2}

A diagnosis of trichomycosis axillaris is suspected on the basis of clinical findings, and can sometimes be supported by

additional techniques such as Wood light, direct microscopy, and dermoscopy. Confirmation of the diagnosis is based on culture, although false negatives are not unknown. The diagnosis is sometimes made retrospectively, after observing a rapid response to the use of hygienic measures and topical antibiotics.^{2,3}

We present a typical case of trichomycosis axillaris and we review the dermoscopic findings.

The patient was an 84-year-old man with a past history of atrial fibrillation and systemic hypertension on treatment with acenocumarol and enalapril, and surgical excision of a basal cell carcinoma and superficial spreading melanoma. He consulted for axillary bromhidrosis that had started 2 months earlier. Examination revealed soft, yellowish-white, irregular masses with a bad odor, adherent to the central segment of the hairs in the axilla (Fig. 1A). Weak, yellow-white fluorescence was observed with Wood light (Fig. 1B). On dermoscopy, irregular yellowish-white masses were observed around the hairs, some forming white concretions with a brush-like or feathery appearance (Fig. 2). Direct examination with potassium hydroxide (KOH) revealed numerous mucoid sheaths around the hairs (Fig. 3). On Gram stain, hair shafts were observed to be massively colonized by gram-positive coccobacillary structures.

A diagnosis of trichomycosis axillaris was made and 2 weeks of treatment with topical clindamycin was prescribed, leading to complete resolution of the condition.

Three clinical forms of trichomycosis are recognized: flava, rubra, and nigra. Trichomycosis flava is the most common and is characterized by the presence of odor-

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