

## **Hand Dermatitis; it may be just a fungal infection El Dermatiti; sadece mantar enfeksiyonu olabilir**

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### **Abstract**

Hand dermatitis is a common problem among professionals exposed to chemical irritants, like farmers, construction workers, health care professionals, machinists, housekeepers etc. Several clinical variants of hand dermatitis have been described, including contact, hyperkeratotic, frictional, nummular, atopic, pompholyx and chronic vesicular hand dermatitis. Topical corticosteroids are usually firstline agents for inflammatory hand dermatitis. But gram-positive bacteria and/or fungal infections should be considered in chronic cases and in cases that do not respond to conventional treatment.

**Key words:** dermatitis, fungal, hand

### **Özet**

Çiftçi, inşaat işçisi, sağlık çalışanları, makinistler ve ev temizliği gibi kimyasal iritanlara maruz kalan çalışanlarda el dermatiti sık görülen bir problemdir. Kontak, hiperkeratotik, friksiyonel, numuler, atopik, pompholyx ve kronik veziküler el dermatiti gibi çeşitli el dermatiti klinikleri tanımlanmıştır. Topikal kortikosteroidler inflamatuvar el dermatiti için ilk kullanılacak ajanlardır. Ancak kronik vakalarda ve klasik tedaviye cevap vermeyen vakalarda gram pozitif ve/veya mantar enfeksiyonları göz önüne alınmalıdır.

**Anahtar kelimeler:** dermatit, mantar, el

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### **Introduction**

Hand dermatitis is a common problem with a prevalence of (1) 2% to 9% in general population. It is common among professionals exposed to chemical irritants, like farmers, construction workers, health care professionals, machinists, housekeepers etc. Use of latex gloves, chemical exposure, frequent handwashing are risk factors for hand dermatitis. It is estimated that 5% to 7% of patients with hand dermatitis are characterized as having chronic or severe symptoms and 2% to 4% of severe cases are refractory to traditional topical treatment (2). Gram positive bacteria and/or fungal infections should be considered in chronic cases and in cases that do not respond to conventional treatment (3). In this presentation, we aimed to describe a case diagnosed as hand dermatitis.

### **Case**

A 42 years old housewife K.A., attended to our hospital Sultandagi State hospital, with symptoms of recurrent itchy vesiculobullous, fissured hand dermatitis which have a duration of 2 years. She has been attended to dermatology clinics several times and keratolytics, steroids prescribed for her disease. Symptoms were worsened after using medications and relieved after cessation of medications. She described her life as a nightmare, she was feeling herself handicapped. She was ashamed to show her hands in public and washing dishes was a torture to herself.

In native preparation of material, obtained scratching of active lesions' border by sculpture, hifas were seen. So antifungal agent, terbinafine, was prescribed topically and she was told to cover her hand with a nonimmunologic medical gloves to increase the effect of topical agent. The first picture is showing the patient's attendance lesions, picture 2 was taken after 4th day of medication, and picture 3 is 7th day of medication. The symptoms were relieved and the patient was thankful.

**Figure 1:** Patient's attendance lesions.



**Figure 2:** Fourth day of medication.



**Figure 3:** Seventh day of medication.



## Discussion

Several clinical variants of hand dermatitis have been described, including contact (i.e. allergic and irritant), hyperkeratotic (i.e. psoriasiform or tylotic), frictional, nummular, atopic, pompholyx (i.e. dyshidrosis) and chronic vesicular hand dermatitis.

Contact dermatitis is usually classified as either irritant or allergic contact dermatitis. Irritant contact dermatitis comprises approximately 80% of contact dermatoses and results from direct skin exposure to irritants such as water, soap, and chemicals (4). Treatment must be aimed at allergen identification and avoidance as well as control of inflammation (3).

Hyperkeratotic hand dermatitis is characterized by highly irritable, scaly, fissured, hyperkeratotic patches on the palms and palmar surfaces of the fingers. The aetiology is unknown. Patch tests are usually negative (5), and the incidence of atopy and psoriasis is no greater than in a normal control population. The distinction from

localized psoriasis of the hands can, however, be very difficult. It is most frequent seen in men of middle age or over, and is extremely refractory to treatment, although PUVA may be helpful (6).

Mechanical factors such as trauma, friction, pressure, and vibration may also induce skin changes. Individuals who handle large amounts of paper may be affected by frictional hand dermatitis, sometimes termed “wear-and-tear” dermatitis. Work related frictional hand dermatitis may take years to develop. The clinical manifestations depend on the intensity and chronicity of the mechanical stimulus (7).

A patchy, somewhat vesicular and lichenified eczema is a common manifestation of atopic dermatitis of hands in childhood. The nails are often involved, resulting in coarse pitting and ridging. A more diffuse, chronic lichenified eczema of the hands is frequently found in cases of extensive atopic dermatitis which persist into adult life and atopic dermatitis is frequently a

contributory factor in many cases of what usually has to be called constitutional hand eczema (8).

Topical corticosteroids are usually first-line agents for inflammatory hand dermatitis. In general, ointments are more effective and contain fewer preservatives and additives than creams. Long term use of topical corticosteroids is limited by local and potentially systemic side effects, such as skin atrophy, striae and telangiectasia (9). Gram positive bacteria and/or fungal infections should be considered in chronic cases and in cases that do not respond to conventional treatment (3).

## **Conclusion**

There are several types of hand eczema. Differential diagnosis and patient's history have to be obtained properly to achieve cure in this kind of complex diseases. In primary care, longitudinality of care must be achieved. If the patients' attendance of all steps of health care system without guidance of family physician can't be frustrated, the benefits of system of health care would be limited.

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