

## *Demodex Folliculorum* Mimicking Fungal Infection: A Case Report

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### Abstract

Demodex is an ectoparasite of pilo-sebaceous follicle and sebaceous gland, it can mimic many other inflammatory dermatoses such as folliculitis, rosacea and perioral dermatitis-like lesions. We present a case of a patient living in rural, with reddish brown scaly spots on his neck and chest resembling tinea versicolor. Laboratory examination of skin scraping and adhesive tapes revealed *Demodex folliculorum* mites and no fungal elements. We conclude that scotch tape preparation for microscopic examination is a simple and helpful method to reveal mites presence and rule out false fungal suspicion.

**Keywords:** *Demodex folliculorum*; Mites; Neck; Tinea versicolor

### Introduction

Human demodicosis is a chronic skin disease caused by Demodex mites such as *Demodex folliculorum* and *Demodex brevis*. Demodex mites live in pilosebaceous units and they are affecting most commonly the perioral and periorbital areas of the face [1,2]. The mites are transferred between hosts through contact of hair, eyebrows, and sebaceous glands on the nose. Diagnosis of mites can be made by standardized skin surface biopsy, skin scarping or scotch tape for microscopy [1].

### Case Report

We present the case of a 56 year-old man living in rural area with a background in agriculture, presenting with itchy lesions of the neck and chest manifesting as small flat circular and oval spots, resembling tinea versicolor (Figure 1).

### Discussion

Demodex mites live in pilosebaceous units and they are regarded as part of the normal skin flora. *Demodex folliculorum* adults are 0.4 mm in length [1].

Tinea versicolor is a skin disorder common among young adults, characterized by multiples macules and/or patches [3], older people are also more likely to carry the mites [1].

Demodex mites are present in healthy individuals and may have a pathogenic role only when present in high densities, or in immunosuppression [4].

Demodex is typically found on the face including cheeks, nose, chin, forehead, temples, eye lashes, brows, and also on the balding scalp, ear, neck, and less commonly upper and medial region of chest and back are also infested [5,6].

Our patient had reddish brown scaly patches on left side of the neck and the chest, this clinical finding wasn't highly specific for demodicosis, because tinea versicolor is characterized by multiples macules and/or patches usually present on the back and chest and occasionally on the neck, shoulders, upper arms and face. The diagnosis of tinea versicolor is based on clinical suspicion of the classic presentation of pruritic papules found on the back, chest upper arms and occasionally the neck [3].



**Figure 1:** Reddish brown spots on chest.

Direct examination of skin scarping and scotch tape showed no evidence of tinea versicolor, However, we describe the body parts of *Demodex folliculorum*, including the head-neck segment, the body-tail segment, the four pairs of short legs attached to the head-neck and the mouth part are shown (Figure 2).



**Figure 2:** *Demodex folliculorum* microscopy.

There was no biological evidence of tinea versicolor on scotch tapes applied on lesions, but the presence of mites of 0.4 mm in length was characteristic of *Demodex folliculorum* [1].

A case of demodicosis mimicking favus has been reported in an immunocompetent child [7].

The detection of mites can be realized by microscopic examination of potassium hydroxide preparation from biological samples taken by scraping and squeezing method, scotch tape applied on lesion, or by standardized skin surface biopsy, usually considering abnormal anything more than 5 mites per cm<sup>2</sup> [4].

## Conclusion

To our knowledge, human demodicosis can present as a variety of clinical manifestations mimicking many other dermatoses, and our patient clinical condition may resemble tinea versicolor. The microscopic examination of a scotch applied on lesion is easy and may be helpful in identifying mites or fungal element, in order to avoid misdiagnosis and establish the best treatment options.

## Conflict of Interest:

None declared

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