Tinea Versicolor, Which is More Prominent on the Hemiparetic Side of the Body

Vücudun Hemiparetik Tarafında Daha Belirgin Olan Tinea Versikolor

Aysun Şikar AKTÜRK*, Nurşad ÇİFCİ†, Serap MÜLAYIM‡

*Department of Dermatology, Kocaeli University Faculty of Medicine, Kocaeli, Türkiye
†Clinic of Dermatology, Kocaeli Derince Training and Research Hospital, Kocaeli, Türkiye
‡Department of Neurology, Kocaeli University Faculty of Medicine, Kocaeli, Türkiye

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ABSTRACT Hemiparesis is a neurological deficit characterized by partial loss of muscle strength in one half of the body. It has been reported that the skin on the hemiparetic side may differ from the normal body region for some reasons, therefore skin diseases may progress differently, and some skin diseases may be seen more frequently or less frequently. However, there is no information in the literature regarding the course of tinea versicolor lesions in these patients. In our article, we present a 52-year-old male patient with tinea versicolor, which is more common on the side with hemiparesis.

Keywords: Hemiparesis; tinea versicolor

Tinea versicolor (pityriasis versicolor) is one of the superficial fungal infections of the skin, which is caused by *Pityrosporum orbiculare* and *Pityrosporum ovale*, found in the normal flora of the skin, dimorphic, lipophilic and opportunistic fungi. Predisposing factors include high temperature, humidity, malnutrition, hyperhidrosis, genetic predisposition, high plasma cortisol levels, immunodeficiency and some drugs. Clinically, it is seen as hypopigmented, hyperpigmented or salmon pink macules and patches with fine scaling on the skin, especially in seborrheic areas, located around the upper body and shoulders.¹

Hemiparesis is a neurological deficit that occurs as a result of acute hemorrhagic and ischemic cerebrovascular accident and it is characterized by partial loss of muscle strength in one half of the body.² There may be difference between the skin of the hemiparetic side and the normal side of the body in sweating, cutaneous blood flow, immune and autonomic functions.³⁴ In addition, due to the loss of motor function and limitation of movement in the extremities, the fold areas of the body remain moist and it becomes difficult for the patients to clean their own body. For all these reasons, it has been reported that some skin diseases in these patients may progress differently between the hemiparetic side and the other healthy side.⁷¹² Moreover some skin diseases may be seen more frequently or less frequently on the hemiplegic/hemiparetic side.⁷¹²
In this article, we presented a 52-year-old male patient with more extensive tinea versicolor, especially on the skin of the hemiparetic side of the body.

CASE REPORT

A 52-year-old male patient presented with a brown discoloration on his back that appeared during the summer months for 10 years, which resolved by leaving white spots. However, he described that, the spots were more common especially on the left side of his body for 6 years. The patient had a history of hemiparesis on left side of his body. It was learned that hemiparesis developed 7 years ago as a result of embolism due to the patent foramen ovale in the heart.

In the neurologic examination, hemiparesis with 3/5 loss of muscle strength in the left lower and upper extremities were observed. Other systemic examination findings were normal. In the dermatological examination, multiple hypopigmented macules with pityriasiform scales were observed, which were more prominent on the left half of the back (Figure 1). In cranial Magnetic resonance imaging that was taken 7 years ago, in the right frontal lobe there were diffusion restriction areas consistent with infarction (Figure 2). Microscopic examination revealed short hyphae and spores compatible with Malassezia furfur. We made sweat test and it was observed that the sweating in the left half of the body decreased compared to the right half (Figure 3).

As a result of clinical and direct microscopic examination, a diagnosis of tinea versicolor was made and appropriate treatment was recommended. Our patient was found to be worth presenting because tinea versicolor lesions were much more prominent and widespread, especially in the hemiparetic left half of the body. Consent was obtained from our patient for this case report.

DISCUSSION

Some skin diseases may progress differently on the hemiplegic/hemiparetic side of the body. To our knowledge there are few case reports on skin findings of hemiplegic/hemiparetic patients. In a study from Türkiye, it was reported that tinea pedis, onychomycosis, xerosis and reduction in lower extremity hair were more common in patients with hemiplegia/hemiparesis than in healthy individuals. There is another study...
consistent with this result about clubbing. Consistent with this result about clubbing.7 Bullous pemphigoid, scabies, are also reported as seen on the hemiplegic side, while scleroderma lesions, endogenous eczema, beau lines on the nails and psoriasis lesions were reported to be seen on the intact side.3,4,8-11 No information was found about tinea versicolor in previous studies.

In our case, the patient stated that, before hemiparesis developed, lesions were fewer and seen on both side of the body but after his neurological disease, his lesions were more common on the affected left side. Consistent with this history, we observed that the lesions were more prominent on the left side of the body.

It is known that, in the skin on the neurologically affected side, there may be changes in the blood flow, alterations in immune functions, and autonomic functions.3,6,12 We thought that impaired autonomic innervation may cause changes in the sweating and so we performed the sweat test. Test result showed that the sweating on the hemiparetic left side of the body was less than on the right side. This indicates that there is a disorder in autonomic functions in the hemiparetic skin. But, in our patient, the lesions were more prominently seen on the body side with less sweating. There is a contradiction here, as tinea versicolor lesions are known to seen more frequently on moist, sweaty skin.1 So we thought that the reason why the superficial fungal infection was mostly on the hemiparetic side was not related to skin moisture.

It has been also reported that in patients who have had a stroke, there is a reduction in limb blood flow and immune dysfunction due to decreased blood flow.5,12 Moreover it has been reported that in paraplegic patients there may be changes in sebaceous gland function and greasiness have been shown to affect susceptibility to local fungal infections.1,13 So we thought that because of decreased blood flow, impaired immune and sebaceous gland functions, superficial fungal infection was more prominent on the hemiparetic body half of the patient. However, we consider that new prospective studies on etiopathogenesis are needed.

In conclusion; like some previously reported dermatological diseases, tinea versicolor lesions were much more prominent and widespread in our patient, especially on the neurologically damaged half of the trunk. We present our patient to draw attention to the fact that some dermatological diseases may progress differently in patients with hemiparesis.

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**Conflict of Interest**

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

**Authorship Contributions**

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