Original Article

Atrophic Variant Of Tinea Versicolor - A Case Report

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Abstract

Tinea versicolor is a superficial fungal infection caused by Malassezia species characterised by asymptomatic, scaly, hyperpigmented (chromic), hypopigmented (achromic), or erythematous macules and patches involving the seborrheic areas (trunk, neck, and/or arms). An atypical clinical form of pityriasis versicolor has been infrequently reported, in which cutaneous atrophy is associated with individual pityriasis versicolor lesions.A 39-year-old female patient presented with multiple, slightly scaly, hyperpigmented depressed patches on the left side of the arm, abdomen, thigh and leg. Our microscopic examination of the skin scrapings on a KOH preparation revealed numerous short hyphae and spores. We report this case of atrophying tinea versicolor because of its rarity,unilateral and non seborrheic area involvement which is easily misdiagnosed.

KEYWORDS- Misdiagnosis, Pityriasis versicolor, Rare variant

INTRODUCTION:

An atypical clinical form of pityriasis versicolor has been infrequently reported, in which cutaneous atrophy is associated with individual pityriasis versicolor lesions. The distribution of affected skin reflects the lipophilic nature of the fungus since the seborrheic areas (trunk, neck, and/or arms) are predominantly involved. We report this rare case of atrophying tinea versicolor because of its unilateral and predominant non seborrheic area involvement leading to easy misdiagnosis by the dermatologists.

CASE REPORT:

A 39-year-old female patient came to dermatology OPD with complaints of multiple asymptomatic, brown coloured lesions over the left side of the body for 3 months. She was misdiagnosed as a case of Morphea and was treated with topical corticosteroids and vitamin D analog at a private hospital. The lesions were progressing in number and size.

On examination numerous hyperpigmented macules and patches of varying sizes with fine scaling and central atrophy(Figure:1) were noted over the anterior aspect of the left leg, lateral aspect of the thigh(Figure: 2 & 3). A few lesions were noted over the medial aspect of the left arm, left breast and left side of the abdomen. Other cutaneous examination was unremarcable. Skin scrapings from these areas for 3 consecutive days were examined microscopically using potassium hydroxide (KOH) preparation showed numerous short hyphae and spores showing “spaghetti and meatballs” appearance(Figure: 4). A punch biopsy of size 3x3mm was taken from the lesion over the shin of the left lower leg. Biopsy showed atrophic epidermis, dermal atrophy, dermal elastolysis, and superficial perivascular lymphocytic infiltrate. Baseline blood investigations were within normal limits. Patient was started on oral itraconazole 100 mg twice daily along with topical ketoconazole 2% application twice daily. A short contact therapy with 2.5 % selenium sulphide for 15 minutes before bath was also given. After 1 month of follow-up the lesions responded to treatment and the patient is on follow-up(Figure: 5). Since atrophying tinea versicolor needs a longer duration of treatment, the patient was advised to continue the same medications for a few more weeks.

Figure: 1 - Hyperpigmented patch showing scales and central atrophy

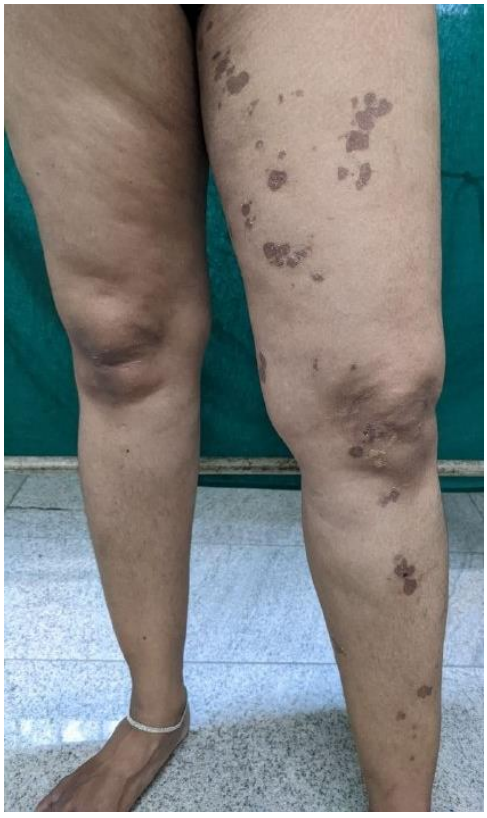

Figure: 2

Figure: 3

Figure: 2 & 3

Numerous hyperpigmented macules and patches of varying sizes with fine scaling and central atrophy were noted over the left lower leg and lateral aspect of the thigh.

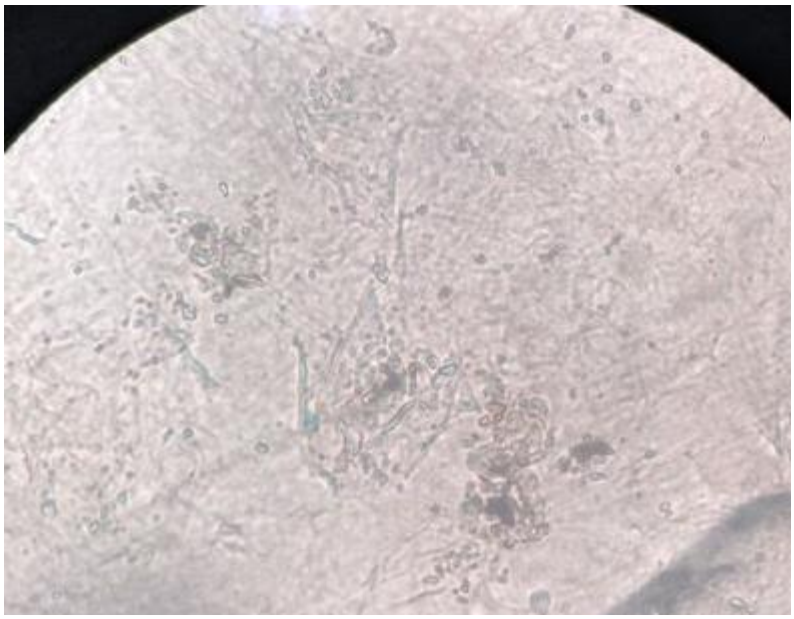

Figure:4 - Potassium hydroxide (KOH) preparation under microscope showed numerous short hyphae and spores showing “spaghetti and meatballs” appearance.

Figure: 5-Follow-up after one month

DISCUSSION:

Crowson and Magro coined the term 'atrophying tinea versicolor' which should be considered one of the rare variants of TV.[1] Atrophying pityriasis versicolor occurring in an older age, range from 17 years to 74 years old with the median around 50 years old and also usually involving the typical locations as classical pityriasis versicolor.[2]The distribution of affected skin reflects the lipophilic nature of the fungus since the seborrheic areas (trunk, neck, and/or arms) are predominantly involved. But in contrast the lesions were predominantly present over the left lower extremity in our case. Some cases of atrophying TV may be associated with a history of long-term topical corticosteroid use. Similarly in our case, topical corticosteroids usage because of misdiagnosis lead to formation of new lesions. The link between topical steroids and the onset of atrophy may be causal or simply coincidental. So skin atrophy is believed to have occurred due to mechanisms such as delayed-type hypersensitivity reactions, or to the direct effect of Malassezia on NF-κB signaling. Furthermore, stimulation of Malassezia in the horny layer increased the synthesis of pro-inflammatory cytokines such as IL-1β and TNF-α leading to apoptosis and impaired proliferation of keratinocytes caused by TNF-α.[1,2,3]

Gentle scraping of the patches will induce the scale that can be examined under KOH preparation for spores and short hyphae. Histopathology will reveal the classic short hyphae and spores in the stratum corneum as well as partial atrophy of the epidermis.The histopathological difference between steroid atrophy and atrophying pityriasis versicolor is that corticosteroid-induced atrophy is associated with profound epidermal atrophy, telangiectasias, and attenuation in the collagen framework.[2] In atrophying pityriasis versicolor, there is dermal elastolysis contributing to the occurrence of skin atrophy.

Atrophying TV should be added to the differential diagnosis of other atrophying conditions, such as anetoderma, atrophoderma of Pasini and Pierini, morphea, lupus erythematosus, dermatomyositis, parapsoriasis, mycosis fungoides, poikilodermatous T-cell dyscrasias, acrodermatitis chronic atrophicans, sarcoidosis, and cutis laxa.[5] Cases in which scales exist concurrently with atrophic lesions, it is wise to ascertain whether atrophying pityriasis versicolor might be the cause and a simple KOH examination will aid in the diagnosis.

Although atrophying pityriasis versicolor shared the same treatment regimens as classical pityriasis versicolor, a longer treatment period might be required for atrophying type.[1] Treatment options include oral itraconazole 200 mg daily along with 2% ketoconazole cream application twice daily. Usually the atrophic lesions will gradually improve and mycological recovery will be achieved within approximately

3 months after the initiation of treatment. This shows that atrophying pityriasis versicolor has a relatively good prognosis compared with other diseases that cause skin atrophy.[1,2,3] Knowledge about the recurrences in this variant are insufficient.

CONCLUSION:

We report this rare case of atrophying tinea versicolor because of its unilateral and predominant non seborrheic area involvement. We also would like to emphasise that all dermatologists should include atrophying tinea versicolor in the differential diagnosis of any atrophic lesion of skin.

REFERENCES:

1. Crowson AN, Magro CM. Atrophying tinea versicolor: a clinical and histological study of 12 patients. Int J Dermatol. 2003;42:928–932.
2. Chang YM, Wu PY. Atrophying pityriasis versicolor: A rare variant with review of literature. Dermatol Sin 2021;39:83-4
3. Yang YS, Shin MK, Haw CR. Atrophying pityriasis versicolor: Is this a new variant of pityriasis versicolor? Ann Dermatol 2010;22:456-9.
4. Tatnall FM, Rycroft RJ. Pityriasis versicolor with cutaneous atrophy induced by topical steroid application. Clin Exp Dermatol. 1985;10:258–261
5. Paradisi M, Constantini G, Muscianese V, Voglino A. Pityriasis versicolor atrophicans. Chron Derm. 1978;5:564–565.