CASE REPORT

Pityriasis Versicolor Atrophicans: A two case report in Ecuador

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ABSTRACT

The atrophic variant of pityriasis versicolor is very rare, with very few cases in the medical literature reported. Two cases of pityriasis versicolor are presented in two patients: one from Ecuador and the other from Venezuela, aged 29 and 45 years respectively. Clinical and dermatoscopic findings, mycological and dermatopathological studies are analyzed, which helped us to confirm the diagnosis. A brief review of the literature on the subject is made.

INTRODUCTION

Pityriasis versicolor is a very common and chronic superficial mycosis caused by Malassezia sp. It is characterized by the presence of superficial asymptomatic patches with fine scale varying in size and shape; some of them hypochromic, hyperchromic or erythematous. They are frequently located in the trunk and neck, but they can also spread to other areas, specially if they have been present for a long period of time in immunodeficient patients, as well as individuals who suffer from endocrine disorders or have been exposed to prolonged corticotherapy.[1-2] It is rare that such lesions manifest along with limited atrophy. This clinical variant is known as pityriasis versicolor atrophicans. Two cases of this unusual atrophying variant of mycosis are reported.

CASE REPORT

Case 1

29-year-old female Ecuadorian patient presents with a 3-year-old atrophying dermatosis on her back and neck. The patient infomed us about consulting with some specialists and having received treatment involving topical steroids based on a presumptive diagnosis of atrophoderma of Pasini and Pierini. As her condition did not improve, she made an appointment at the center to ask for a second opinion. Physical examination confirmed the presence of erythematous, oval, depressed and round lesions converging in atrophic patches, accompanied by mild superficial desquamation, located on the neck and the back's upper third (Fig. 1A). Dermoscopic examination revealed multiple telangiectasias on lesions (Fig. 1C).

Wood's lamp examination revealed fluorescence. (Fig. 1B). Mycological examinations (direct and culture), along with hematoxylin and eosin histopathology, and PAS and elastic fiber staining, were ordered to confirm diagnosis of pityriasis versicolor atrophicans. Mycological examination confirmed the presence of Malassezia sp. Histopathology revealed numerous mycotic structures within the stratum corneum (hyphae and spore), compatible with Pitirosporum sp (Fig. 2A), PAS-positive (Fig. 2B); elastic fiber staining shows slight reduction and fragmentation. These findings confirmed the diagnosis of pityriasis versicolor atrophicans (Fig. 2C). The patient received treatment with itraconazole oral (100 mg BID) and topical terbinafine for 1 month. A complete clearance of the lesions was observed, along with full recovery from atrophy, which continues to this day (Fig. 3).

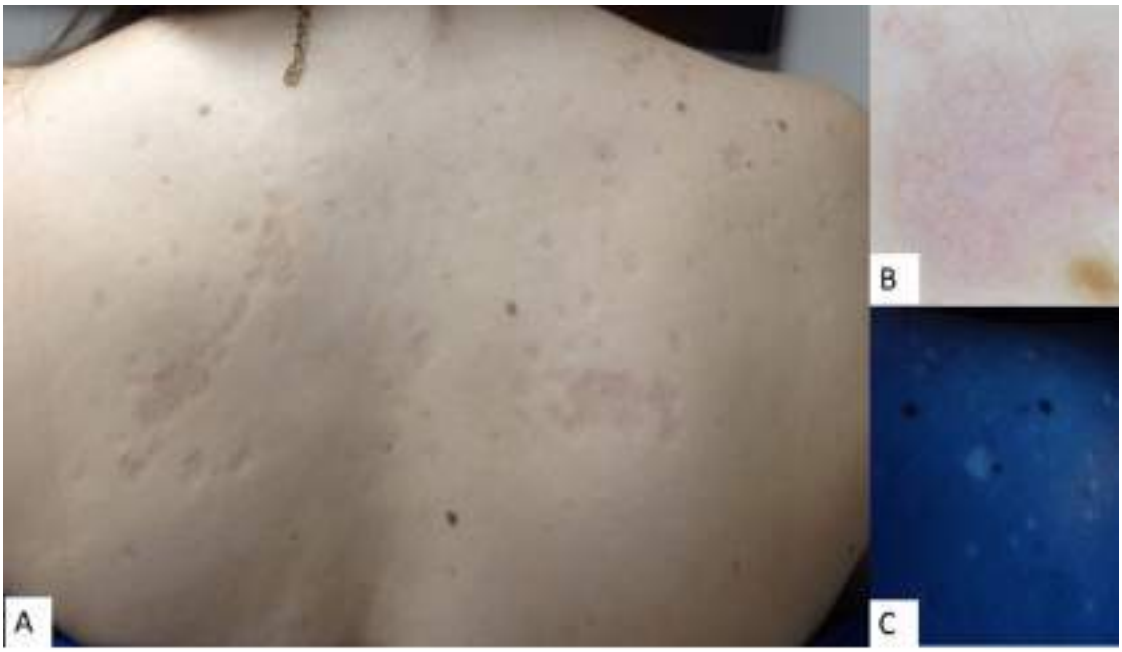

Figure 1. A) Atrophic-like depressed patches on the patient's back. B) Dermoscopic image of one of the lesions with telangiectasias. C) Wood's light fluorescence.

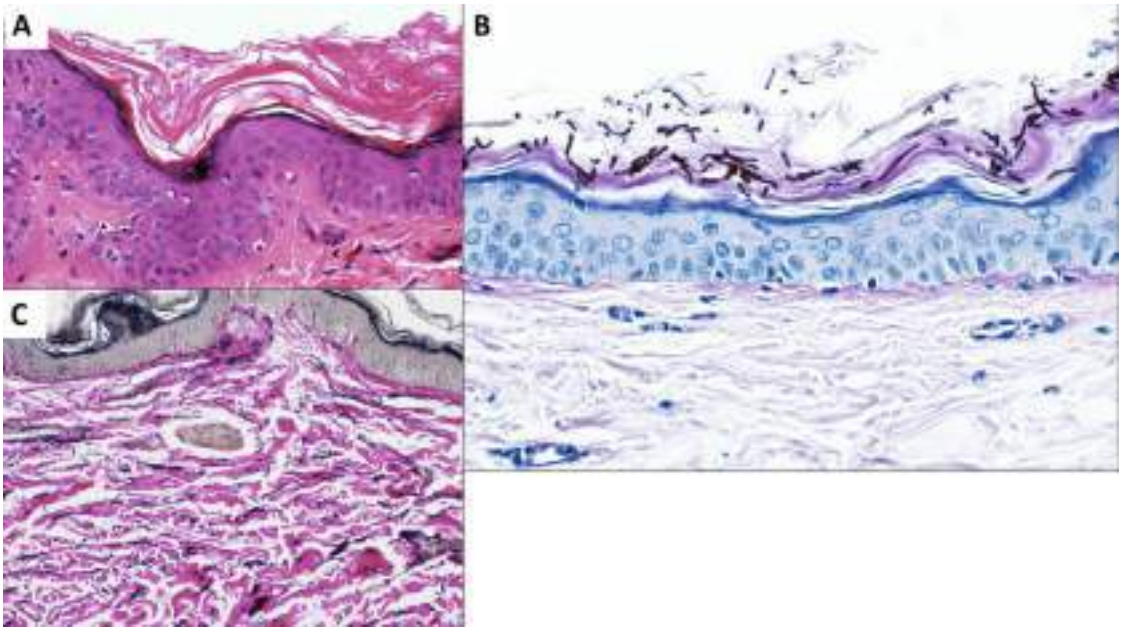

Figure 2. Histopathological findings: A) Hematoxylin and eosin. B) PAS staining. C) Elastic fiber staining.

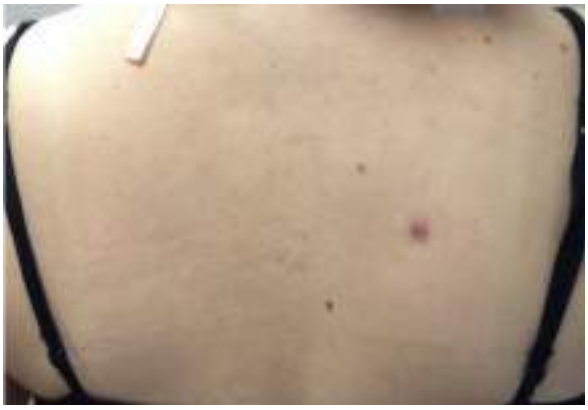

Figure 3. Post-treatment follow-up. Lesional clearance. Lesion at the right quadrant corresponds to the biopsy site.

Case 2

45-year-old female Venezuelan patient, residing in Ecuador, presents with 1-year-old lesions located on the back. The patient reports presence of spots, for which she consulted and received treatment with topical steroids and anti-histaminics with no results. After six months, such spots manifested as depressed-type lesions which had multiplied. Examination showed numerous hypochromic macules, and depressed-type and atrophic-like lesions located on the back (Fig. 4a). Wood's lamp examination distinguished moderate fluorescence of multiple lesions. However, atrophic lesions did not show up fluorescence (Fig.4b). Dermoscopic examination (Fig.-5ª) evidenced discretely elevated margin (brown arrow), areas with mild erythema on the background (red arrow), and some desquamation (white arrows), while other areas (Fig. 5b) manifested a wrinkled appearance and dark pigmentation (white circle). Due to previous experience with the other case, histopathological examination was not necessary. Mycological examination was required and it reported the presence of multiple fungal structures compatible with Malassezia spp (Fig.6). The patient received treatment with Ketoconazole shampoo, which was applied to the skin for 15 minutes during 5 straight days. The treatment followed with terbinafine BID. Capsules of itraconazole 100 mg were also prescribed (two a day for 15 days). After 20 days, the patient returned for a follow-up. Great improvement was observed, along with a marked reduction of lesions and the disappearance of fluorescence (Fig. 7).

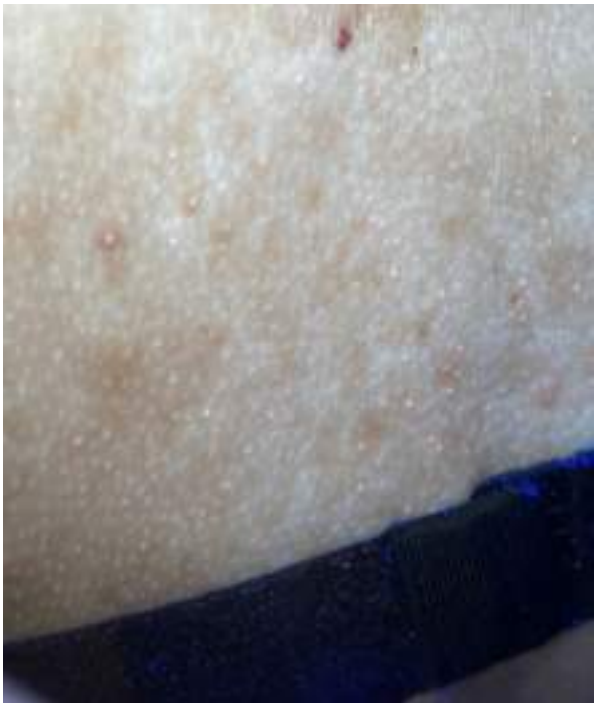

Figure 4a. Atrophic-like lesions are observed on the back.

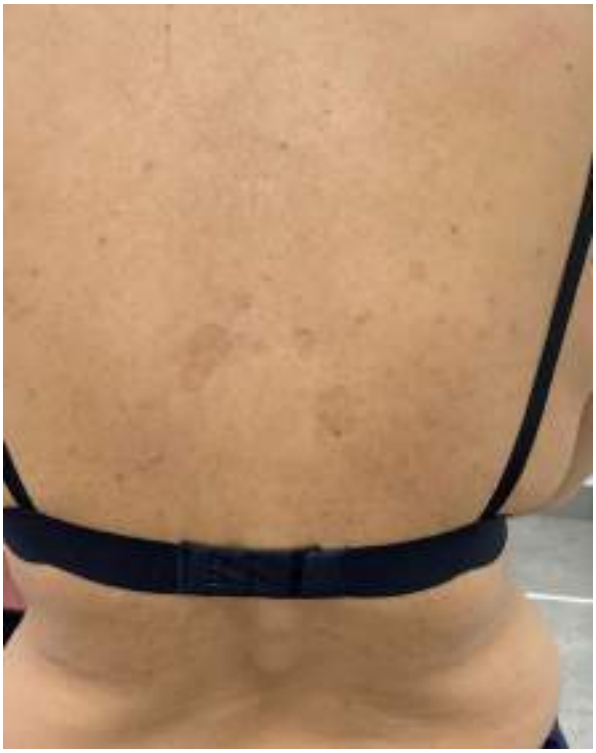

Figure 4b. Wood's lamp examination reveals profuse fluorescence.

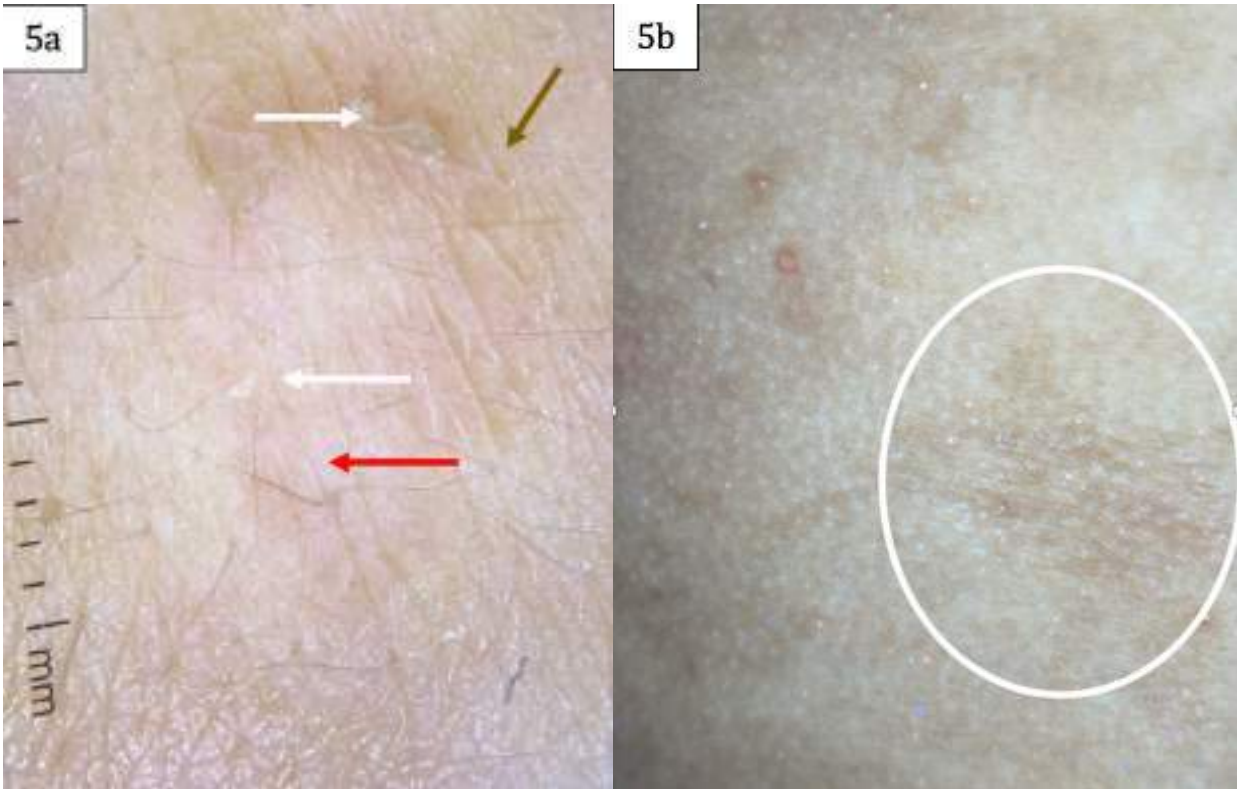

Figure 5a. Dermoscopy shows discretely elevated margin (brown arrow), mild erythema (red arrow) and desquamation (white arrow).
Figure 5b. Dermoscopy. Wrinkled appearance and dark pigmentation (white circle).

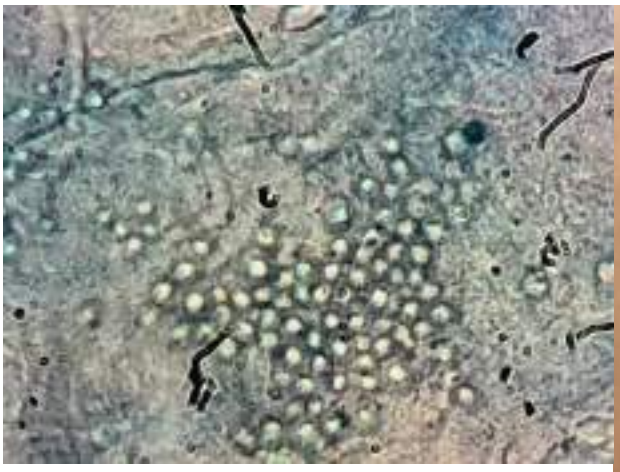

Figure 6. Mycological examination. Presence of hyphae and diagnostic spores.

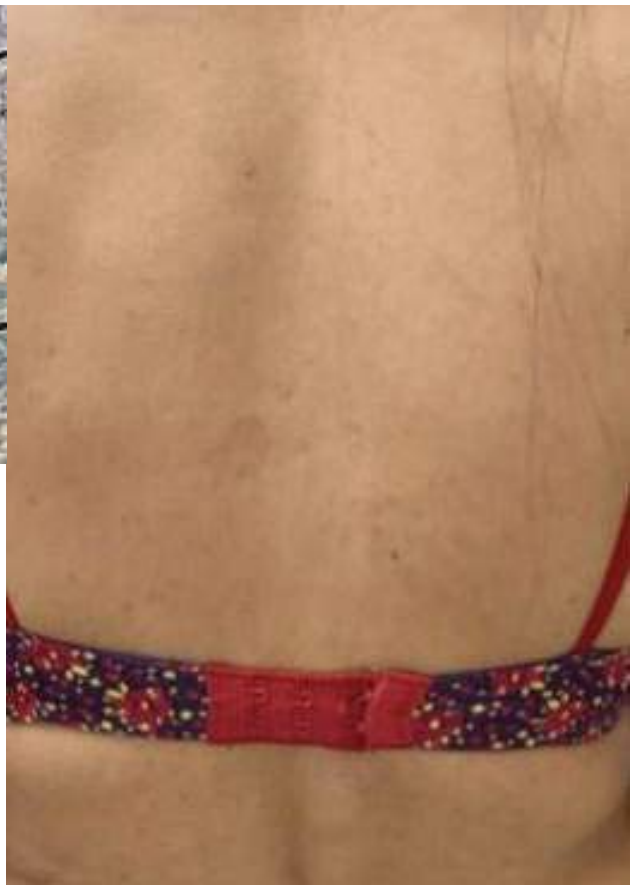

Figure 7. Patient follow-up after 20 days. Lesions have largely resolved. Moderate residual lesions remain.

DISCUSSION

Atrophy on lesions of pityriasis versicolor was first recognized in 1971 by De Graciansky and Mery, in association with a prolonged use of topical steroids.[3] Later in 2003, Crowson and Magro perform a clinicopathological revision to 12 patients and suggest for this entity to be recognized as pityriasis versicolor atrophicans. However, unlike previous reports, just 1 patient had been treated with topical steroids.[4]

Pityriasis versicolor atrophicans is a very rare variant, with only about 25 to 30 cases found in medical literature. It is characterized by ivory, oval or round lesions, with a typically depressed, and occasionally parchment-like surface. It may be accompanied by mild superficial desquamation.[2]

Atrophy of these lesions remains controversial. Some associate it with the chronic use of steroids on lesions which are initially confused with eczemas. These medicines inhibit collagen synthesis and reduce the mitotic activity of keratinocytes. Other authors question this theory, and consider that atrophy caused by steroids is not reversible, contrary to what occurs in this disease.[6] In this patient's case, she was treated with topical steroids after being erroneously diagnosed with atrophoderma of Pasini and Pierini. Lesions already presented with atrophy. A second theory suggested by Crowson et al, who found no steroid use among most of their patients, describes that skin atrophy has a 2-way-mechanism. One mechanism entails a delayed-type hypersensitivity reaction produced by antigens deriving from Malassezia, which instigates the release of elastase, and provokes dermal elastolysis. The other mechanism is produced by a direct effect of Malassezia on the NF-kB signaling system. In this case, inflammation leads to the synthesis of TNF-α or interleukin-1β, which in turn generates apoptosis and the alteration of keratinocyte proliferation.[4]

Differential diagnosis must be done with other conditions which manifest skin atrophy, such as systemic lupus erythematosus, dermatomyositis, morphea, anetodermia, necrobiosis lipoidica, atrofoderma, cutis laxa, mycosis fungoides, lichen sclerosus et atrophicus, intralesional steroid-induced atrophy, among others.[7,2,8,9,10]

In the study conducted by Crowson et al, no biopsy requests posed pityriasis versicolor atrophicans as the first diagnostic possibility biopsy. This reveals a great knowledge gap on this condition from the part of dermatologists.[4]

During the clinical examination, the presence of desquamation in atrophic lesions, especially those located in typical areas of pityriasis versicolor, might be helpful to suspect its diagnosis. In this particular case, the use of Wood's light was helpful to confirm diagnosis. It is advisable to first approach the study by using KOH mount and mycological culture. A positive result would confirm the diagnosis[11] and would eliminate the need to conduct a biopsy.[2] Dermoscopic examination is essentially based on what was found in both patients. Their findings do not match. In the first case, profuse vasodilation predominates, and in the second case, there is a presence of desquamation, along with a rough surface and greater delimitation of the elevated margin. However, no comparison can be made due to the lack of dermoscopic reports within the medical literature realm. However, as the nature of the clinical picture is atypical, many cases require histopathological examination. This allows the visualization of the stratum corneum and the presence of spores and hyphae 'pityrosporum'. Furthermore, poikilodermatose alterations, along with perifollicular elastolysis and lymphocytic interface dermatitis may be found. Elastic fiber alterations do not manifest frequently.[4,7]

The usual antimitotic treatment for pityriasis versicolor usually reverts atrophy. This is an indication of good prognosis. Some authors have reported that their patients had to take oral antimitotic agents for longer periods than in cases of classic pityriasis versicolor, because these cases were more compromised.[12,10] The atypicality surrounding the clinical picture could explain the delay of diagnosis. The first patient showed resolution of lesions after a month of antimitotic treatment, while the second one presented a 90% improvement after 20 days of treatment.

CONCLUSION

It is important to recognize and differentiate this rare variant of pityriasis versicolor from other conditions manifesting skin atrophy, because this variant has good prognosis, evidenced by the reversal of atrophy with antimitotic treatment. However, it is still debated whether this disease is a variant or consequence of bad treatment. Malassezia, while confined in the stratum corneum, breaks the skin barrier, and thus increases the absorption of steroids which generates atrophy located in the pityriasis area. As a consequence, Méndez and Bonifaz suggest the name of pityriasis versicolor pseudoatrophicans, as a more adequate option.[13] Diagnosis of pityriasis versicolor must be clinical. However, atypical forms, such as this one, create the need to implement diagnostic auxiliary methods, such as Wood's lamp examination or Besnier's sign (scraping the lesions or tightening of the surrounding skin, which allows the visualization of the characteristic pityriasiform desquamation). Diagnosis is confirmed by KOH testing, which allows physicians to observe spores and yeast (giving the impression of spaghetti and meatballs). Biopsy is more suitable for cases which are more complex.[14] These two cases are reported so that dermatologists become more aware of this condition, which may be more common than expected. As far as we know, these are the first reported cases of pityriasis versicolor atrophicans within the ecuadorian medical literature.

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