

Lichen sclerosus et atrophicus and allergic contact dermatitis: A significant association

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Summary

Lichen sclerosus et atrophicus (LSA) is a chronic inflammatory skin disease of unknown etiology. It mainly affects the anogenital area, while the extragenital involvement is uncommon. It manifests as pale, ivory-colored lesions and partially atrophic skin. We report a case of a woman presenting to our department with LSA lesions at the level of the armpit. Furthermore, the patient was allergic to nickel sulfate and balsam of Peru. We assume the presence of an association between nickel allergy and onset of LSA.

KEYWORDS

allergic contact dermatitis, axillae, lichen sclerosus et atrophicus, nickel sulfate

1 | INTRODUCTION

Lichen sclerosus et atrophicus (LSA) is a chronic inflammatory skin disease of unknown etiology,¹ characterized by white scar-like plaques.

It most commonly affects the anogenital area, while involvement of the extragenital areas is less common, accounting only for 6%-20% of cases. When not observed in the anogenital area, it is usually localized at the level of the torso, neck, shoulders, and sub-mammary area.²

The extragenital type manifests as pale, ivory-colored lesions and partially atrophic skin. Differently from genital LSA, lesions are not symptomatic and do not cause itch and pain. The extragenital type is also not associated with an increased risk of malignant transformation.

In this article, we report a case of a female patient with extragenital LSA and allergy to nickel sulfate. We hypothesize a possible association between these two conditions.

2 | CASE REPORT

We present a case of a 38-year-old woman admitted to our Department of Dermatology for the presence of bilateral axillary achromic patches.

The patient reported that this cutaneous affection appeared approximately two years prior to the clinical visit. The patient was apparently

in good health, with negative allergic anamnesis and no history of cutaneous diseases. As mentioned by the patient, she was a habitual user of spray deodorants and the application of deodorants had caused occasional itching and erythematous lesions on the axillary cables.

At the physical investigation, we observed the presence of achromic patches disposed on both the axillary cables (Figure 1A,B). They were multiple and confluent. The skin lesions appeared smooth, with jagged and demarcated edges. There was no other cutaneous or mucosal involvement. As mentioned by the patient, the skin lesions were associated with occasional and irregular itch.

We performed a 4 mm punch biopsy on the skin lesions and an histological examination revealed acanthotic and hyperkeratotic epidermis, with poorly represented sclerotic dermis and well represented eccrine glands (Figure 2). The case was compatible with extragenital lichen sclerosus et atrophicus (LSA).

According to the anamnestic data on patient habits, we performed patch test SIDAPA series, assuming nickel sensitivity. The test was positive for nickel sulfate (+++) and balsam of Peru (++)

3 | DISCUSSION

Extragenital LSA is less frequent than genital LSA: 15%-20% cases of extragenital lesions are associated with classic genital LSA, and

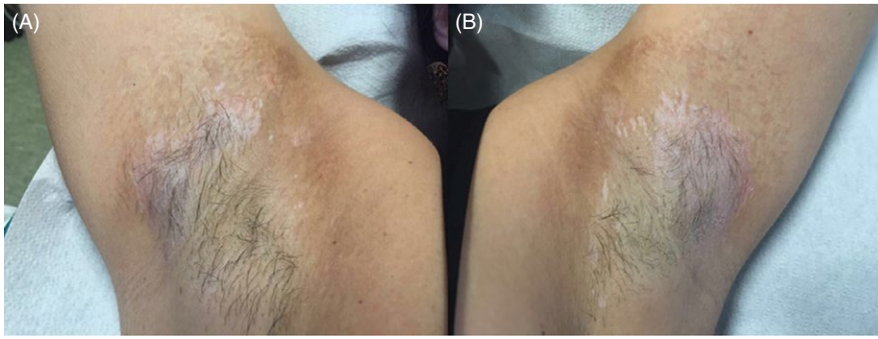


FIGURE 1 A, B, Multiple achromic patches localized bilaterally at the axillary cables, somewhere confluent and with demarcated edges

only in 2.5% of the cases, there is a solitary involvement of the extragenital site.³

The bilateral axillary involvement observed in our patient is not frequent and not commonly described in Literature.⁴

Considering the nickel sulfate and balsam of Peru positivity at the patch test, we hypothesized a possible connection between the allergic background of our patient and the onset of LSA.

The patient had a bilateral LSA of the axillary cables, confirmed histologically. Furthermore, before the onset of LSA, the patient applied for a certain period nonhypoallergenic deodorant spray, with consequent bilateral erythema and itching. In fact, the patch test performed revealed a positivity to nickel sulfate and balsam of Peru.

As first hypothesis, we considered a possible traumatic role of nickel sulfate. According to the Literature, LSA can be observed in post-traumatic areas as a result of Koebner phenomenon.^{5,6} Based on this association, the contact with the nickel sulfate contained in the deodorant spray and the consequent occurrence of erythema could have been the traumatic stimulus to LSA in our patient.

As an alternative, we hypothesized a possible direct role of nickel sulfate in triggering the onset of LSA.

However, studies concerning a possible association between allergic dermatitis and LSA have been rarely described in Literature. Becker et al have found a significant comorbidity between LSA and atopic skin diathesis in young male patients.⁷

Recently, Bjork et al have studied a possible correlation of these two conditions: They observed that the group with genital lichen sclerosus had positive reactions to more allergens in patch tests than the control group.⁸

In 2015, Keith et al have postulated a possible role of eosinophils in explaining the association of LSA with allergic dermatitis. In fact, some cases of LSA are characterized by eosinophilic dermal infiltration. However, the authors did not find a statistically significant association between eosinophils and LSA associated with allergic dermatitis.⁹ In any case, eosinophils were not detected in our patient.

Given these recent studies and considering the scarcity of evidence in Literature, we believe further research on the connection between allergy and LSA is necessary.

4 | CONCLUSION

We have presented an unusual clinical case of extragenital LSA in a patient with nickel sulfate and balsam of Peru allergy. We hypothesize an association between the allergic background of our patient and LSA. The cause of this association could be a traumatic role of the allergens with a consequent Koebner phenomenon. Alternatively, the allergens might have a direct role in triggering the onset of LSA. In Literature, there are only a limited number of studies observing a possible connection between allergic dermatitis and LSA. Starting from these studies and from our clinical case, we believe there might be a direct correlation between allergy and LSA. Consequently, it is necessary to increase the case reports and to study more in detail this issue connecting allergology and dermatology.

CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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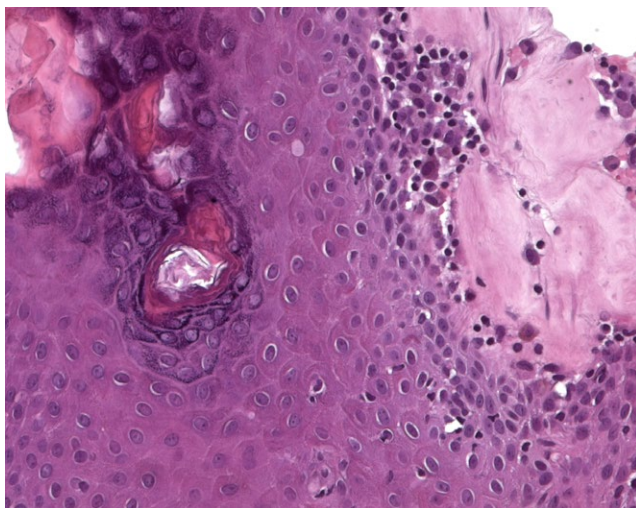


FIGURE 2 Acanthotic and hyperkeratotic epidermis, with poorly represented sclerotic dermi and well represented eccrine glands

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