

Lymphocytom Cutis Triggered by Hair Colour Dermatitis

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SUMMARY

A case of lymphocytoma cutis provoked by hair dye dermatitis is described. The case has shown clinical and histological evidences of lymphocytoma cutis. The lesions did not heal spontaneously or with topical steroid alone, but the patient has responded perfectly to the combination of topical and systemic steroids. Up to our knowledge, lymphocytoma cutis triggered by hair colour dermatitis has not been previously described.

Lymphocytoma cutis represents a benign hyperplasia of the reticulo-endothelial tissue of the skin with formation of localized or disseminated lesions which can occur at any age, but commonly presents in late teenage and early adult life. Such lesion have apparently followed insect bites, trauma, drug, irritation actinic injury, infections and gold earrings¹. The disease is not a manifestation of any systemic disorder²

The lesions of lymphocytoma cutis can mimic malignant lymphoma of the skin clinically to an extent that makes distinction between benign and malignant lesions extremely difficult or even impossible³. Although considered benign, rare instances of malignant changes have been reported.⁴

Case Report

A 45-year-old man was first seen at the Dermatology clinic in October 1990 because of

severe acute allergic contact dermatitis of whole scalp, back of the neck, earlobes, peri-auricular and retro-auricular areas of both sides, following the application of hair dye to the scalp and beard two days prior to the reaction. The patient did not know the name or the ingredient of the hair dye which he used for the first time.

The patient was treated with Betamethsone 0.1% loction topically and prednisolone 5mg tablet. He showed a rapid response to the treatment, the lesions were completely cleared after seven days treatment.

Three months later, he presented because of new lesions that developed on the face as small symptomless lesions that gradually increased through the last month. There was not history of trauma, insect bites, vaccination or drug intake and the patient did not use hair dye again during the last period.

Family history of a similar skin eruption was negative. No history of chest illness, nasal obstruction or epistaxis. The patient was in good general condition. Chest, heart and abdomen were free. Spleen and lymph nodes were not enlarged. Neurological examination showed no abnormality.

Examination of the face showed multiple, firm, smooth, shiny, elevated nodules of different sizes affecting both pre and retro-auricular areas and cheeks, and plaques infiltrating the earlobes bilaterally and

symmetrically (Figs. 1,A and B). Sensation to cold, heat and pain at the sites of the lesions was intact, and the peripheral nerves were not enlarged. There was no ulceration or scar formation at these sites, and regional lymph glands were not enlarged. No other site in the body was similarly affected.

Complete blood count, erythrocyte sedimentation rate, rapid plasma reagin, urinalysis and chest X-ray were all normal. Patch test to para-phenylenediamine (the allergen of hair dye) revealed a strong reaction.



Figure 1a.: Multiple, smooth, shiny nodules of different sizes affecting both pre and retro-auricular areas.

Four millimeter punch biopsy was obtained from the lesion at the retroauricle area. The microscopic finding of the biopsy showed the



Figure 1b.: Multiple small nodules in the cheek and plaques infiltrating the earlobes.

epidermis to be essentially normal. Dense lymphocytic infiltrate is present in the upper and mid-cutis separated from the epidermis by a zone of normal collagen (Fig.2). The lymphocytic infiltration of the dermis is composed of mature, well differentiated cells with few active germinal centers. Mitotic figures were not present (Fig.3).

The patient was treated with topical floucinolone acetonide 0.025% for two weeks. As no improvement was noted, oral prednisolone was added in a 10mgm daily dose for three weeks.

Marked improvement was noted; all the nodules and plaques disappeared within 3 weeks from the beginning of the treatment. In

the last visit, 4 months ago, the patient was free of previous lesions.

Discussion

Lymphocytoma cutis may occur in both localized and disseminated forms. The localized type is far more common and typically affects the face, earlobes, and nasal tip.⁵ In both types, general health is never affected. There is no enlargement of the spleen or lymph nodes and the peripheral blood is normal.⁶

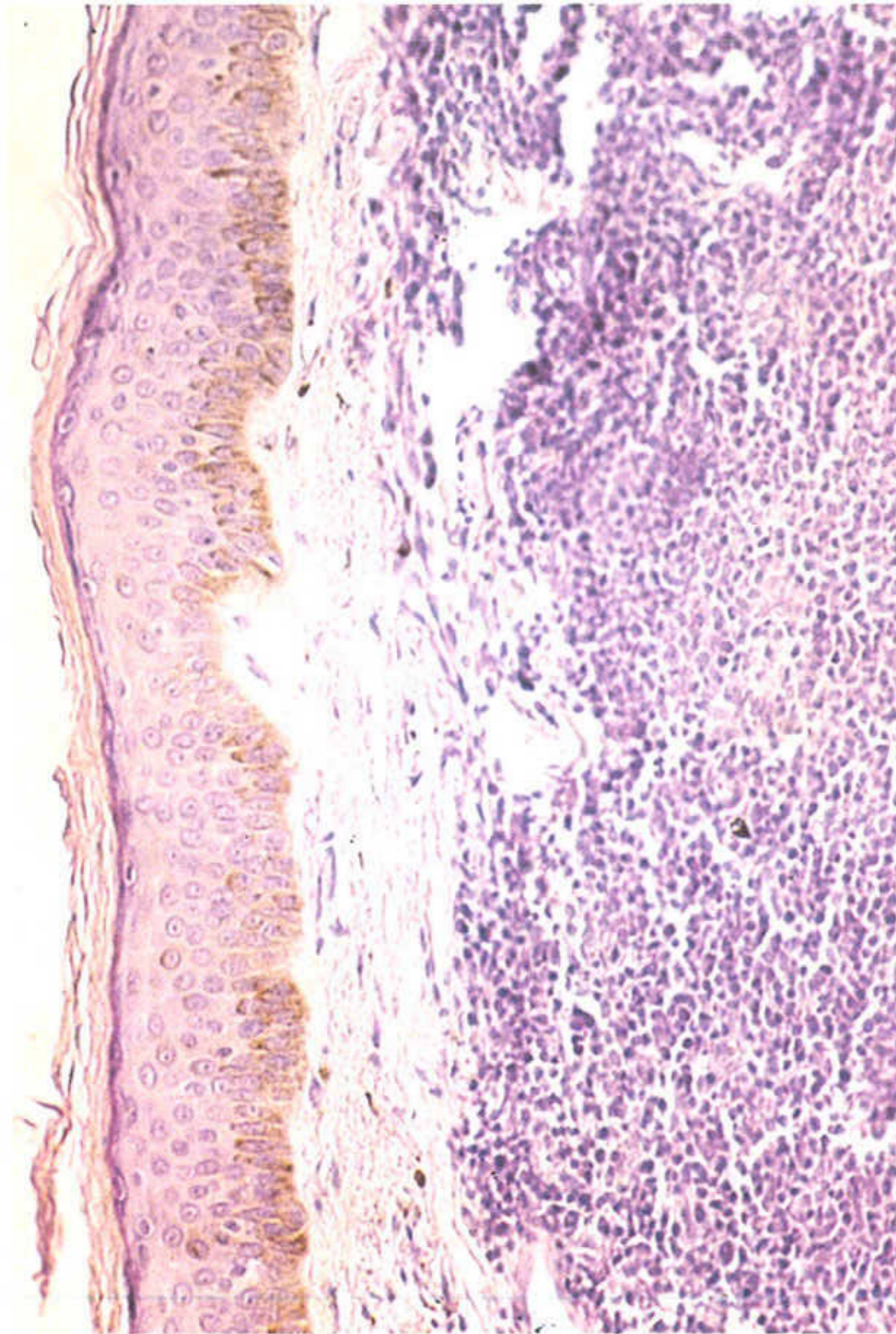


Figure 2: The epidermis is essentially normal. Dense lymphocytic infiltrate in the upper and mid-cutis separated from the epidermis by a zone of normal collagen.

Vesicular lesions of the oral mucous membranes and nodular lesions of the ocular

conjunctiva as well as other unusual forms of lymphocytoma cutis have been reported⁷. Individual lesions may regress spontaneously, but may recur in 50% of the cases at the original or distant sites.⁸

The clinical differential diagnosis should include sarcoidosis, trichoepithelioma, lepromatous leprosy, histiocytoma, Jessner's lymphocytic infiltration of the skin, and malignant lymphoma. All of these forms can be easily differentiated histologically.⁵

The malignant potential of lymphocytomas has not been well defined. It has been stated that malignant degeneration does not occur in a true lymphocytoma, and that patients in whom extra-cutaneous lymphomatous malignant neoplasms develop, had undiagnosed lymphoma from the start.⁹

In the majority of cases of lymphocytoma cutis, the provoking factors are not known. Light sensitivity, trauma, insect bites, infection, vaccination, tattoo, gold earrings, coexisting other dermatoses (i.e. erythema chronicum migrans, acrodermatitis chronica atrophicans), and auto-immunity have been proposed.^{7,10}

In our case, the hair dye sensitivity may be the provoking factor. The allergen to the so called paro-potential of hair dye apparently resides in the para-phenylenediamine or its oxidation products alone¹¹.

Lymphoplasia has been reported to occur under peculiar conditions such as vaccination¹², and repeated hyposensitization injections. It is possible that these injections may alter the immunological reaction¹³.

Keiji¹ reported three patients that developed lymphocytoma cutis-like nodules few months after wearing pierced-type gold earrings. The lesions are considered to be formed on the basis of an allergic reaction to gold. This finding suggests that continuous exposure of the dermis to gold in a sensitized person may induce a lymphadenoid cellular reaction¹⁴.

No treatment is needed in many cases of the localized form of lymphocytoma cutis since it may spontaneously regress. However various

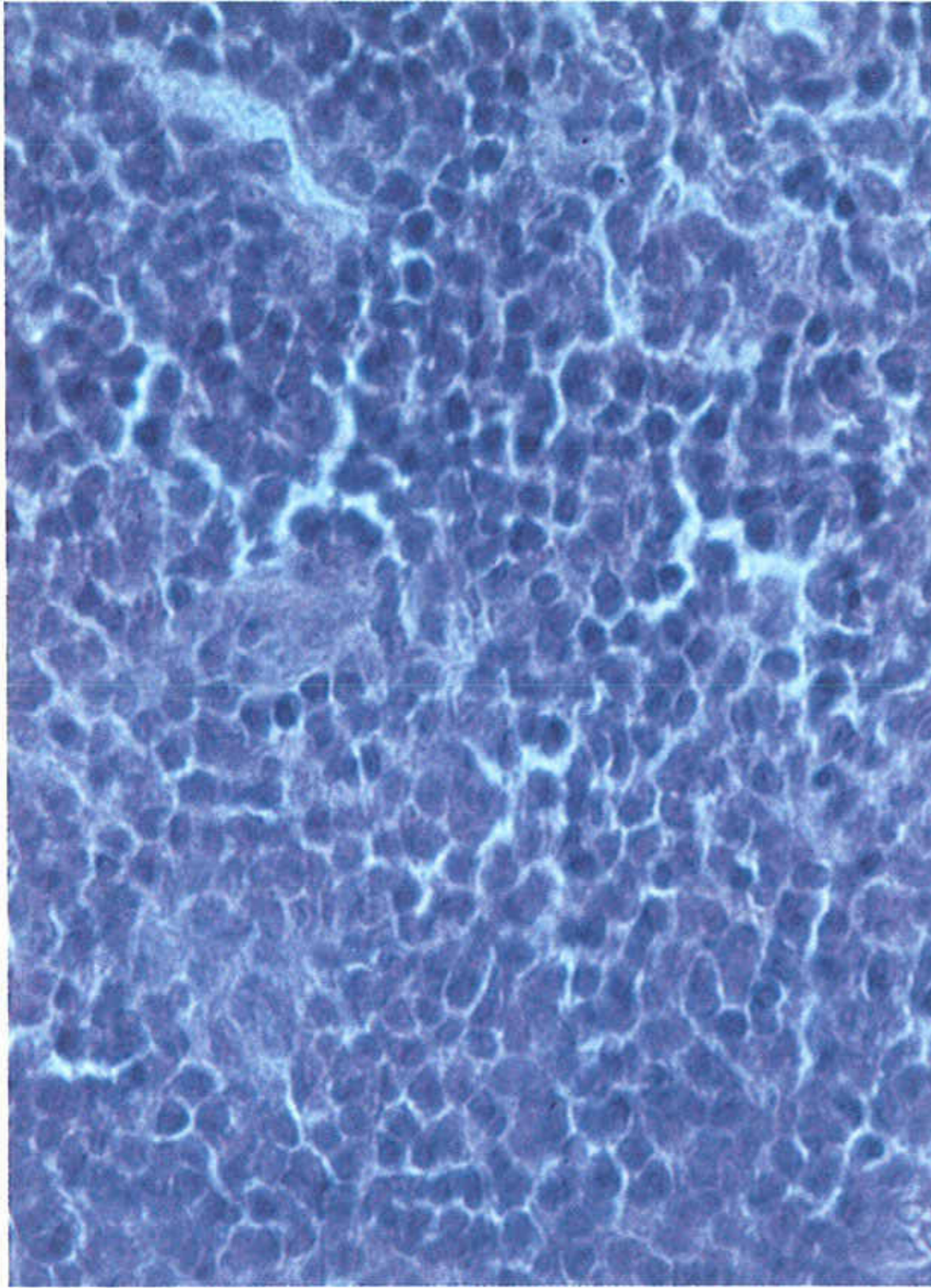


Figure 3: Lymphocytic infiltration of the dermis composed of mature, well differentiated cells with few germinal centers. Mitotic figures were not present.

treatments have been tried⁵.

The case reported here was not responding to topical steroids alone, while showed an excellent response to the combination of both topical and systemic corticosteroid treatment. This may explain the allergic basis of the eruption in our patient.

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