

## Case Report

# Lepromatous Leprosy with Rosette

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Received: April 16, 2020; Accepted: May 04, 2020;

Published: May 11, 2020

## Introduction

We have come to appreciate that the rosette structure, depicted as 4 white points arranged as a 4-leaf clover or as leaves radiating out from a central stem, may be seen under polarized dermoscopy in a range of skin lesions. Until recently, rosettes were deemed to be a dermoscopic structure observed only in Actinic Keratoses (AKs) and Squamous Cell Carcinoma (SCCs), and their presence was thought to support this diagnosis. We assert, instead, that rosettes are not uniquely specific to SCCs. Rather, rosettes can be seen in a variety of neoplasms, including, but not limited to, basal cell carcinomas and melanomas. They have also been observed in nonlesional actinically damaged skin.

We report a case of a lepromatous leprosy with rosette in dermoscopy.

## Case Report

### Patient history

Male patient aged 47 with leprosy family history of his father who is dead.

**Current disease status:** General physical examination showed the patient to be conscious and oriented. No adenopathies were palpated. Bilateral hypoacusia was noted. He also presented dysphonia

and epistaxis. He had spontaneous mobility of the extremities, where examination revealed the amputation of fingers, and hand edema.

Total facial deformation as a result of the lepromatous lesions: leonine facies, nodules eroded in places including the forehead, periorbital region, nose and chin, accentuation of wrinkles, a cutis gyrata, and the presence of multiple nodules in the tongue. The patient was sensitive to touch. His dental health was poor and revealed multiple caries and root remains, missing teeth. We also found diffuse nodules with scrotal ulcerations and palmoplantar keratoderma.

The dermoscopy of the oral mucosa revealed an erythematous background with white streaks and rosettes.

**Biopsies and diagnosis:** He initially undergone in 2012 a skin biopsy revealing a non-langerhans histiocytosis then was lost sight. In view of these clinical aspects, we thought about several diagnoses: lepromatous leprosy, tertiary syphilis, nodular progressive

histiocytosis, erdheim chester disease, mycosis fungoides and sarcoidosis, a new biopsy was made confirming the diagnosis lepromatous leprosy.

**Treatment:** An anti-leprosy triple therapy (rifampicin, dapsone, clofazimine) is started and a prophylactic treatment has been attributed to the family. A declaration of the disease has been made.

## Discussion

Rosettes are peculiar structures only observed with polarized dermoscopy [1]. They are defined as four white points, arranged as a four leaf clover. Since recently the term 'four-clod dots' is used for these structures. First believed to be specific for actinic keratosis and squamous cell carcinoma, they are not lesion-specific and are described in many lesions [2].

They are seen exclusively with polarized dermoscopy and are not visualized under nonpolarized dermoscopy or in nondermoscopic clinical images. We believe that rosettes are probably attributable to an optical effect of the polarized light and its interaction with adnexal openings that are either narrowed or filled with keratin [3].

Rosettes are common and more numerous in AKs and SCCs, we have seen that they can also be seen in melanomas and basal cell carcinomas but also many other dermatosis.

The histological correlation has shown that the interpretation of rosettes depends on their size. The small ones correspond to intra-follicular keratin, whereas the large rosettes correspond to perifollicular fibrosis [4].

Dermoscopy facilitates the diagnosis of inflammatory and infectious conditions by demonstrating a characteristic pattern.

Infections and inflammatory diseases manifesting as granulomas exhibit useful patterns by dermoscopy. Lupus vulgaris, sarcoidosis, necrobiosis lipoidica, and granuloma annulare are evaluated for dermoscopic patterns. However, there is no description of dermoscopy of lepromatous leprosy in the literature.

In the literature, they reported a description of a case of border line tuberculosis leprosy with white areas, yellow globules, telangiectasia, white dots [5]. Our case is the first reported in the literature. We found some streaks and rosettes and the peculiarity of this case is the presence of these dermoscopic signs at the mucous level.

The presence of rosettes in the lepromatous leprosy is explained by the predominance of fibrosis in papillardermis.

## Conclusion

This is the first report of dermoscopy of lepromatous leprosy in the literature. Dermoscopy of lepromatous leprosy shows characteristic patterns. Thus, even though rosettes are not specific, it can add valuable information for the diagnosis of leprosy.

**References**

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