Our Dermatology Online

Case Report

Red lunula: A case report

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ABSTRACT

The red lunula has been associated with cutaneous, systemic, and immunological disorders. Other circumstances in which it has been described include corticosteroid and azathioprine therapy, malnutrition, and substance abuse. Doctors outside of dermatology are unaware of this entity, which shows us that dermatological examination is important to make a comprehensive clinical diagnosis. Herein, we present a male with scales on the neck and scalp and red spots that had appeared and disappeared on the arms. During the physical examination, we observed red lunulae on the left thumbnail, onychorrhexis on the fingernails, lentigo senile, dry skin, and seborrheic keratosis.

Key words: Nails, Nail diseases, Nail malformation

INTRODUCTION

The lunula is a white, semi-lunar shaped, visible part of the distal nail matrix. It is normally observed on the thumb, the index, and the great toe. It is responsible for producing the nail plate's keratin [1-6]. Color anomalies may appear in multiple shapes and sizes and may be idiopathic or related to systemic diseases [1-3,7-8]. Red lunulae have been seen in patients with cutaneous, cardiovascular, endocrine, gastrointestinal, hematologic, hepatic, infectious, neoplastic, neurologic, pulmonary, renal, and rheumatologic disorders [1-11]. Currently, the pathogenesis remains uncertain, yet different hypotheses suggest that red lunulae result from increased arteriolar blood flow and the vasodilatory capacitance phenomenon [2-8,10].

CASE REPORT

Herein, we present the case of an 81-year-old male who consulted the clinic for scales on the neck and scalp and red spots that began to appear and disappear on the arms four to five years previously. During the physical examination, we found a localized dermatosis on the scalp consisting of erythematous plaques and erythematous, violaceous spots on the arms with precise limits and variable size. The rest of the physical examination evidenced onychorrhexis at the level of the fingernails, pinkish-red lunula on the left thumbnail, senile lentigo, dry skin, and seborrheic keratosis. The patient reported a history of hyperuricemia and vasectomy and denied a family medical history.

The red lunula was an incidental finding on dermatological examination for another reason, with dermoscopy accentuating the coloration of the lunula (Figs. 1a and 1b). With these clinical features, the diagnosis of seborrheic dermatitis on the scalp, senile purpura, and the red lunula was established.

DISCUSSION

The lunula is the visible part of the distal nail matrix and defines the nail plate's shape. It has its histological features that allow it to produce keratin to form the nail plate. It is normally seen on the thumb, the index finger, and the great toe as a white half-moon [1-7]. It may present changes in its shape and size, such as macrolunula, microlunula, anolunula, non-convex lunula, and non-symmetric lunula, which may be an indication of trauma, deficiency, or infection [1-3]. Lunula dyschromia may be related to dermatological disorders, systemic diseases, or drug reactions.

How to cite this article: Chang Way P, Alarcon Paiz GA. Red lunula: A case report. Our Dermatol Online. 2024;15(2):177-178.

Submission: 02.05.2023; **Acceptance:** 03.08.2023
DOI: 10.7241/ourd.20242.18

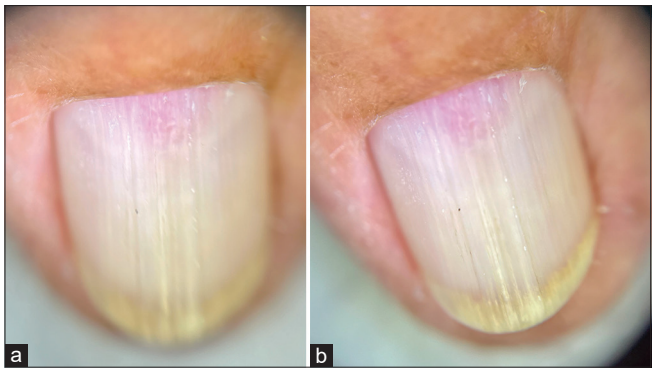

Figure 1: (a and b) Dermoscopy revealing the red coloration of the lunula on the left thumbnail.

Discolorations are variable in color and may be confluent, spotted, or form a longitudinal band [1-3,7].

The red lunula was first reported in 1954. Since then, it has been associated with cardiovascular disorders and endocrine and autoimmune conditions. It seems to occur more often in patients with rheumatoid conditions, such as rheumatoid arthritis, systemic lupus erythematosus, alopecia areata, primary Sjogren's syndrome, and systemic corticosteroid therapy [1-11]. In addition, a subungual tumor and trauma are thought to be the underlying causes of a single red lunula, and connective tissue disease is thought to be a major cause of multiple red lunula [4]. The etiology and histological examination of this onychopathology include increased arteriolar blood flow and dilated and tortuous blood vessels. Although the pathogenesis is unknown, some hypotheses have suggested an increased transparency of the lunula, causing exaggerated visualization of the underlying nail bed vasculature, or congested vasculature due to the inflammation of the nail bed [2-8,10].

This onychopathy is classified into three forms: complete, incomplete, and mottled. In the first one, the entire lunula is erythematous; in the second form, the proximal zone is affected, and the distal zone appears as a white arrow band; and the third one is characterized by a complete red lunula with whitish spots [3,7,8].

On the other hand, actinic purpura, also known as senile purpura, results from the fragility and atrophy of the skin caused by long-term sun exposure. The dermal connective tissue is incapable of holding the microvasculature, causing the extravasation of the blood into the dermis [12]. This microvascular damage may be related to capillary abnormalities, especially in the nail fold. It may be supposed that the red lunula in this patient could have developed as a symptom of senile purpura.

Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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Source of Support: This article has no funding source.
Conflict of Interest: The authors have no conflict of interest to declare.