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Case Report

Dermoscopy of livedoid vasculopathy in skin of color treated successfully with colchicine: a case report

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ABSTRACT

Livedoid vasculopathy (LV) is recurrent and episodic thrombotic dermatosis characterized by pain and ulcerations. It requires early diagnosis, and treatment with combination of drugs. Dermoscopy is a non-invasive technique which enables clinician to visualize subsurface structures of the skin. Here, dermoscopy of LV in skin of color which was treated with colchicine is reported.

Keywords: LV, Dermoscopy, Colchicine, Treatment

INTRODUCTION

Livedoid vasculopathy (LV) is rare dermatosis typified by thrombosis and ulcers. Its pathogenesis, recently, thought to be due to occlusion of cutaneous capillaries resulting in thrombosis, ischemia and infarction leading to ulceration. It presents as chronic, recurrent episodic painful ulcers in the lower extremities and classically patients experience severe pain that disturbs daily activities.[1] Dermoscopy is a rapid and non-invasive adjunctive method in the clinical diagnosis of dermatology clinic. Dermoscopic features of LV consist of vascular strucutres, ivory white areas, pigment network, crusted ulcers and dull red globules.[2,3] Here we report a case of LV treated successfully with colchicine in skin of color.

CASE REPORT

A 38-year-old female presented with painful wounds with swelling of the both lower limbs since 30 days. Examination revealed necrotic ulcers on erythematous background with few scattered erythematous papules and patches (Figure 1 A). Pulses were palpable and there was no lymphadenopathy. Systemic examination was unremarkable. No family history of similar complaints was present. Blood investigations were within normal limits except for low hemoglobin (8 gm/dl). Dermoscopy of early erythematous lesions showed purplish-red areas, scattered red dots on the reddish background with pigment network. Twisted, linear and glomerular were other observations (Figure 1 B and C). Older lesions demonstrated bluish-pink areas (Figure 1 D). Histopathology showed pseudoepitheliomatous hyperplasia and mild perivascular lymphohistiocytic cellular infiltrate, hyalinization of blood vessel walls with extraverted RBCs. Thrombi were also seen within some blood vessels. Based on the clinical, histopathological, and dermoscopy findings, the diagnosis of LV was made. The patient was treated with antibiotic (Topical and systemic), systemic steroids (tapering dose) for 7 days. Later, she received colchicine 0.5 mg twice a day for 2 months. The lesions resolved almost completely (Figure 2 A) and dermoscopy revealed white areas with occasional red globules (Figure 2 B). However, patient had occasional pain, colchicine was continued for another 1 month without recurrence of lesions even after 3 months of follow up.

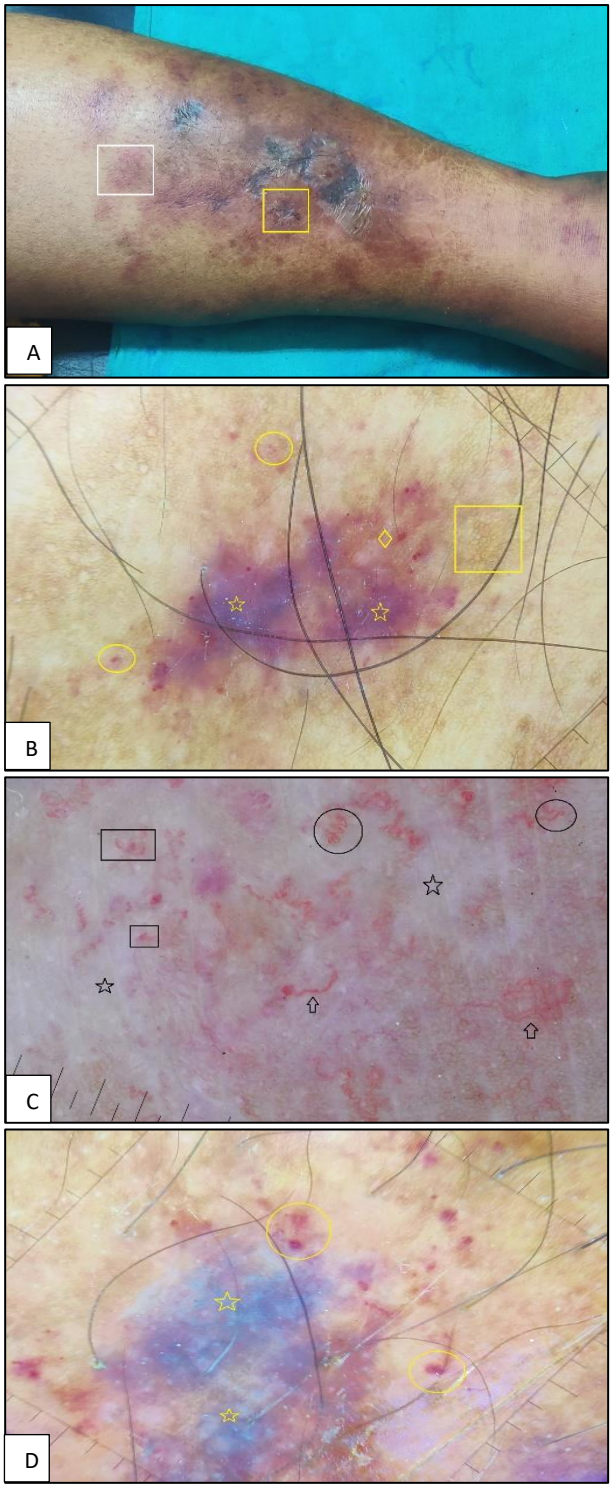

Figure 1 (A-D): Before treatment; Clinical image of LV showing erythematous plaques with necrotic ulceration on the lower leg. White and yellow box indicate early and older lesions respectively. Dermoscopy of early lesions shows red dots (circles), red globules (diamond) and purplish-red areas (stars). Note pigment network at periphery (box), ivory white areas (stars), twisted (circles), linear (box) and glomerular (arrows) vessels. Dermoscopy of late lesions show bluish-pink areas (stars) and red globules (circles).

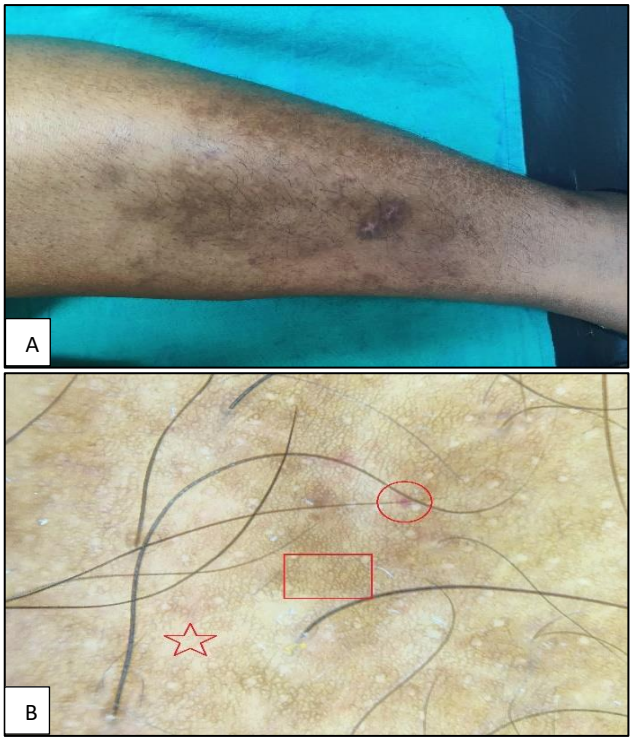

Figure 2 (A and B): After treatment; Clinical image shows near complete resolution of lesions with postinflammatory hyperpigmentation. Dermoscopy shows white areas (star), exaggerated pigment network (box) and occasional red globule (circle).

DISCUSSION

Dermoscopy of LV demonstrates characteristic features such as ivory white areas, vasculature and pigment network.[2] Similar findings were noted in this case also except for bluish-pink area and twisted vessels which were new findings. These dermoscopic feature correlate respectively to heavy melanin with epidermal hyperplasia and dilated capillaries in histopathology. The former finding, in particular, was noted in older lesions in skin of color. Ivory-white area corresponds to collagen in the dermis along with absence of melanin in the epidermis. Tip of dilated capillaries manifest as red dots where as dilated capillaries that are lying horizontally to the epidermis were seen as linear vessels.

The pathogenesis of LV is thought to be due to occlusion of cutaneous microcirculation that results in thrombosis and ischemia. Increased fibrin deposition, activation of plasminogen and platelet dysfunction is attributed in the pathogenesis.[1] Biochemical mechanisms involving defects in the proteins and enzymes involved in the coagulation and fibrinolysis pathways can lead to increased platelet and fibrin rich thrombi in the capillaries leading to its typical cutaneous manifestations.[4] In addition to vascular involvement, patients with LV also have nervous system involvement, possibly caused by deposits of fibrin and thrombin in the vasa nervorum.[5] Neurological involvement in LV is rare and presents

usually as mononeuritis multiplex, months to years after the onset of cutaneous lesions.[6] LV is associated with a variety of underlying conditions, and no single etiology has been identified.[7]

Generally, treatment of LV includes multiple drugs in combination, such as pentoxyfylline, aspirin, dapsone, heparin, danazol and prednisone to achieve remission. Colchicine is an alkaloid with multiple actions and is extensively used in dermatology. It exerts anti-inflammatory and immunosuppressive action in addition to action of neutrophils and macrophages.[8] LV was successfully treated with a combination of pentoxifylline and colchicine.[9] For recalcitrant disease, prostanoids, rivaroxaban, and IVIg have been used.[10] Here interestingly, prednisone for 7 days followed by colchicine alone for 2 months resulted in near complete resolution of lesions. It suggests that colchicine has profound anti-inflammatory action in reducing the occlusion and possible ischemia in early part of disease.

CONCLUSION

LV is a type vasculitis which poses challenge in the treatment. It shows definitive dermoscopic features that correlate well with histopathological findings. Bluish-pink area is noted in late lesions and twisted vessels are seen in early lesions in addition to other classical features. Colchicine could be beneficial with near complete remission of LV lesion when started in the initial stages of disease progression.

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