SKIN

BRIEF ARTICLE

Cutaneous Collagenous Vasculopathy in a Young Adult: A Case Report

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INTRODUCTION

Cutaneous collagenous vasculopathy (CCV) is a rare microangiopathy characterized by generalized cutaneous telangiectasias without associated systemic or mucosal involvement. Clinically, it presents as asymptomatic blanching telangiectasias initially affecting the lower limbs with spread toward the trunk. Typically, it affects middle-aged adults of both genders equally, although some pediatric cases have also been reported.[1-3]

Histologically, CCV is characterized by dilated superficial and markedly thickened dermal vessels displaying reduplication of the

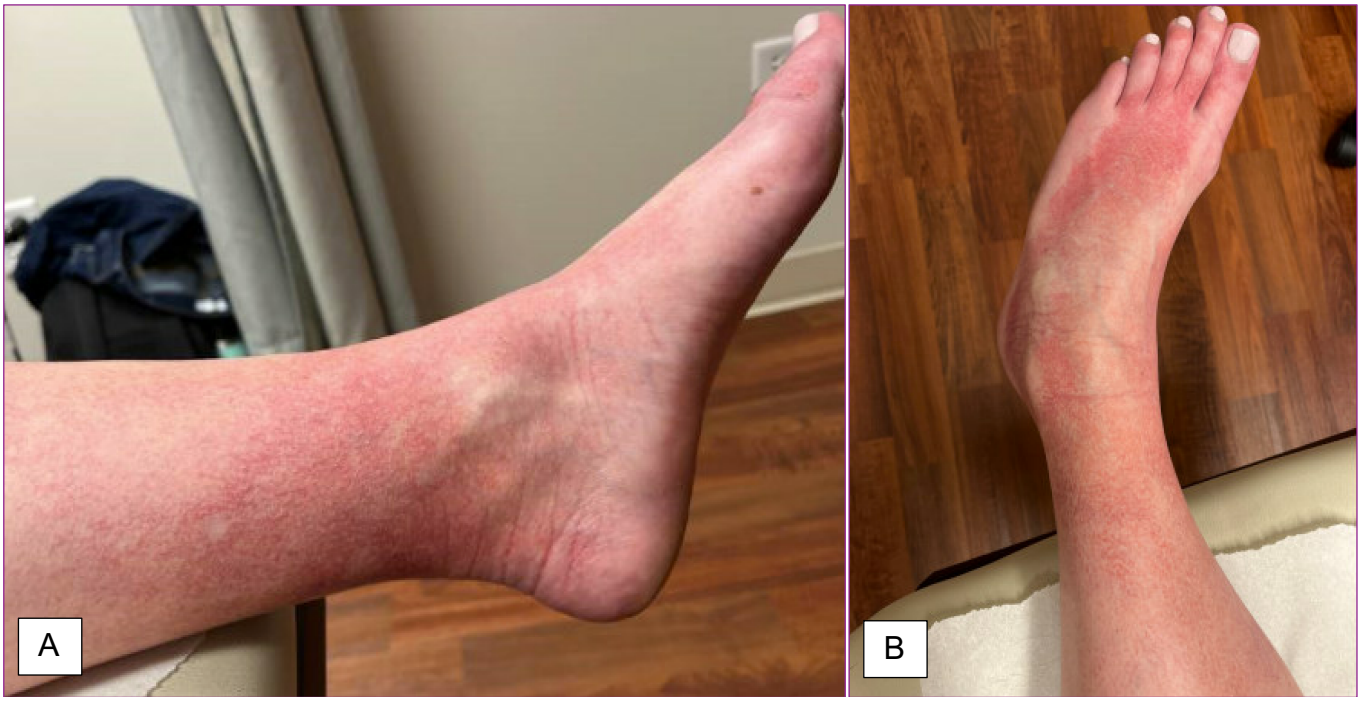

Figure 1. (A) and (B) Clinical photos revealing telangiectatic patches on the left distal leg and dorsal foot

basement membrane on periodic acid – Schiff–diastase staining. In addition, immunohistochemical staining demonstrates the deposition of type IV collagen and absent actin staining. Electron microscopy further shows Luse bodies of collagen fibers with focal endothelial damage.[4] Its unique histopathological features distinguish CCV from its clinical mimicker, generalized essential telangiectasia.[5] Other conditions on the differential diagnosis commonly include hereditary hemorrhagic telangiectasia, angioma serpiginosum, pigmented purpuric dermatoses, telangiectasia macularis eruptiva perstans, poikiloderma, and connective tissue diseases.[6-10]

CASE REPORT

A 24-year-old woman with no significant medical history presented for evaluation of persistent erythematous eruptions on her lower extremities (**Figure 1**). Her only medication was combined oral contraceptives. These eruptions had developed ten years prior at approximately age 14 and became more prominent with time. She denied any pain, itch, burning, or bleeding. After exercise, the lesions became more erythematous and violaceous and felt "tight" after sun exposure. She denied a family history of similar lesions.

Physical examination revealed blanching red to violaceous telangiectatic patches with no petechiae on the bilateral distal lower extremities and feet. A punch biopsy from the left ankle was obtained for diagnosis, revealing superficial dilated blood vessels with thickened vessel walls and the deposition of Pas-positive material (**Figure 2**).

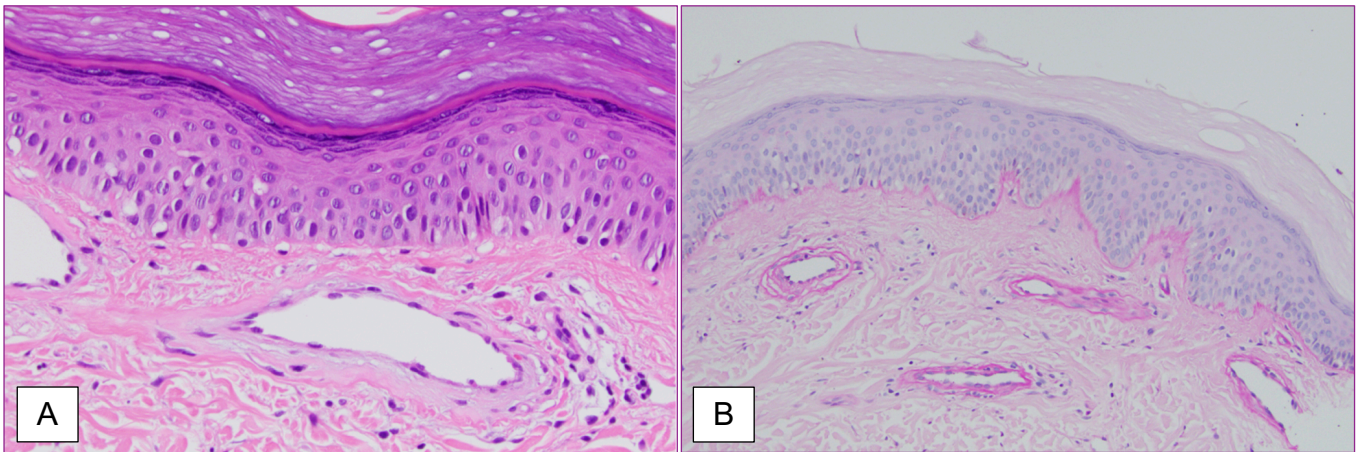

Figure 2. (A) Histopathology of skin biopsy demonstrates dermis with dilated blood vessels (B) The vessel walls are mildly thickened, highlighted by PAS stain

DISCUSSION

Our case of CCV highlights a unique and possibly under-recognized clinical presentation of this disease in a young adult female with no comorbidities. Most earlier cases of CCV have been reported in middle-aged adults. Pediatric onset is a rare and likely underrecognized feature of the disease. The paucity of reported pediatric cases of CCV may be related to lack of pathologic confirmation or confusion with commonly encountered diseases in the pediatric

population including capillary malformations and pigmented purpuric dermatoses.

The pathogenesis of CCV is largely unknown but has been associated with cardiovascular processes, medications, and certain malignancies.[7-9] CCV has been associated with medications, such as VEGF inhibitors, certain chemotherapies, losartan, tetracyclines, acyclovir, ketoconazole, and sclerotherapy with hypertonic saline.[11] However, in this case, the patient had no history of using any of these.

Treatment options for CCV remain limited. Pulsed dye laser and pulsed light therapy have been shown to aid in the regression of these lesions.[12] Our patient considered pulsed dye laser but was later lost to follow-up.

Due to its seemingly benign nature, CCV is rarely biopsied and is thus probably underdiagnosed. While typically asymptomatic, the appearance of CCV may be distressing to patients. Accurate diagnosis of CCV is important in guiding therapeutic management, decreasing unnecessary testing and interventions, and reassuring patients of their condition. Better recognition of this disorder including in the pediatric population would further our understanding of its pathogenesis, risk factors, comorbidities, and whether further workup is necessary.

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