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CUTANEOUS LEUKOCYTOCLASTIC VASCULITIS MASQUERADING AS CHRONIC LEG ULCERS

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ABSTRACT

Cutaneous Small Vessel Vasculitis (CSVV) is a form of single-organ vasculitis mainly affecting the skin's small vessels, characterized histologically by leukocytoclastic vasculitis. Adult males are frequently affected and may be idiopathic or triggered by medications, infections, insect bites, food allergies, or malignancies. Clinically, CSVV presents as palpable purpura, affecting predominantly the dependent areas, and may progress to papules, vesicles, plaques, or necrotic ulcers. Diagnosis is mainly based on clinical features, exclusion of systemic involvement, laboratory tests, and skin biopsy showing angiocentric inflammation, fibrinoid necrosis, RBC extravasation, and leukocytoclasia. Management depends on severity—mild cases are self-limiting and treated symptomatically, while severe or persistent cases require corticosteroids and immunosuppressants. Regular follow-up is essential, as CSVV may occasionally be an early sign of systemic vasculitis. Early recognition and appropriate management are key to preventing complications and ensuring optimal outcomes.

INTRODUCTION

Cutaneous Small Vessel Vasculitis (CSVV) is a form of leukocytoclastic vasculitis limited to the dermal postcapillary venules, characterized by immune-mediated inflammation and damage to the small blood vessels of the skin. It most commonly presents as palpable purpura on dependent areas, often triggered by infections, medications, or systemic diseases, though it can be idiopathic. Histopathology is essential for diagnosis, showing features like neutrophilic infiltration, fibrinoid necrosis, and leukocytoclasia. While CSVV is often self-limiting, persistent or severe cases may require systemic treatment. Early diagnosis is vital to manage symptoms effectively and monitor for potential systemic involvement.[1,2]

Case Report

A 61 year old male came with complaints of multiple red raised lesions and non – healing ulcer over B/L lower limbs for 6 months. Patient complained of pain over the lesion. Patient complained of burning sensation and itching present over B/L lower limbs for past 1 week. History of taking native medications present. Patient is a known case of diabetes mellitus on treatment. O/E multiple tender necrotic ulcers present, the smallest one measuring 0.5*0.5 cm and the largest one measuring 5*5 cm with surrounding erythema. Multiple palpable purpura were present over B/L lower limbs. Investigations revealed low haemoglobin levels, Urine routine –2-3 RBC'S/HPF, pus culture and sensitivity revealed pseudomonas aeruginosa grown sensitive to piperacillin tazobactam, cefipime, ceftazidine, meropenam, tobramycin and methicillin resistant staphylococcus aureus grown sensitive to tetracycline and doxycycline. Biopsy revealed perivascular and transmural neutrophilic infiltration. Diagnosis of cutaneous small vessel vasculitis was made and patient was started on oral steroids under the cover of IV antibiotics based on pus culture and sensitivity reports, saline soaks and anti-diabetic medications.

DISCUSSION

Cutaneous Small Vessel Vasculitis (CSVV) is a type of single-organ vasculitis confined to the skin, characterized by leukocytoclastic vasculitis (LCV), where small dermal blood vessels undergo immune-mediated inflammation. It typically affects individuals in their 30s to 50s and is more common in men. The condition is often idiopathic but can be triggered by drugs (e.g., methotrexate, propylthiouracil), infections, insect bites, food allergies, or malignancies.[3] CSVV belongs to a broader classification of vasculitis that includes skin-limited forms, those associated with systemic diseases like lupus or rheumatoid arthritis, and immune complex-mediated small-vessel vasculitis like IgA vasculitis and cryoglobulinemic vasculitis.

Clinically, CSVV presents as crops of skin lesions in areas of venous stasis, with the hallmark being palpable purpura. These purpura may evolve into papules, vesicles, plaques, or even necrotic ulcers. Other findings may include edema, livedo reticularis, or urticarial lesions. The disease may be self-limiting, but continuous monitoring is crucial as it can be the first indication of an underlying systemic vasculitis. Diagnosis is largely one of exclusion, requiring the elimination of other causes of purpura or systemic involvement.

Investigations include blood tests such as CBC (to assess for infection or thrombocytopenia), renal and liver function tests (for systemic involvement), urinalysis, inflammatory markers (ESR, CRP), and autoimmune screening (ANCA, ANA). Histopathology remains diagnostic, showing segmental vessel wall inflammation, fibrinoid necrosis, RBC extravasation, and a neutrophilic infiltrate with leukocytoclasia-features indicative of small-vessel immune injury.[1,4]

Treatment is mainly supportive in mild cases, using NSAIDs for pain and antihistamines for pruritus. Leg elevation is also beneficial. In more persistent or severe cases, systemic therapy may be required: oral corticosteroids are the first line, followed by colchicine or dapsone if needed. Refractory cases may necessitate immunosuppressants like azathioprine, methotrexate, cyclosporine, or cyclophosphamide. Management is guided by disease severity and the presence of systemic involvement.[5]

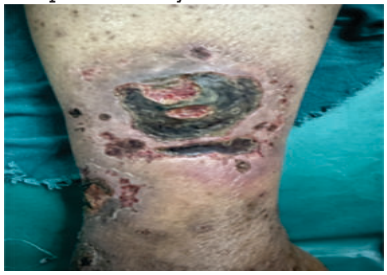

Figure 1: Ulcer Of Size 4*5 Cm With Central Necrosis And Surrounding Erythema Noted Over Right Leg.

CONCLUSION

CSVV is an important dermatologic condition that requires a high index of suspicion and a structured diagnostic approach. Histopathological confirmation is crucial, and treatment should be guided by severity and underlying causes. This case underscores the need for individualized therapy, close follow-up, and awareness of CSVV as a potential initial indicator of systemic vasculitis or infection.

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REFERENCES

1. De D, Kanwar AJ, Handa S. Cutaneous small vessel vasculitis: A study of clinical and histopathological features. Indian J Dermatol Venereol Leprol. 2010 Mar-Apr;76(2):159–64.
2. Ghosh SK, Bandyopadhyay D, Chatterjee G, Biswas SK. Cutaneous small-vessel vasculitis: A 7-year retrospective study of 50 patients in a tertiary care hospital in eastern India. Indian J Dermatol. 2015 Mar-Apr;60(2):145–8.
3. Sardana K, Sharma RC, Garg VK, Mishra D. Cutaneous small vessel vasculitis: Clinico-pathological correlation. Indian J Dermatol Venereol Leprol. 2005 Mar-Apr;71(2):95–8.
4. Carlson JA, Ng BT, Chen KR. Cutaneous vasculitis update: diagnostic criteria, classification, epidemiology, etiology, pathogenesis, evaluation and prognosis. Am J Dermatopathol. 2005 Feb;27(1):504–28.
5. Goeser MR, Laniosz V, Wetter DA. A practical approach to the diagnosis, evaluation, and management of cutaneous small-vessel vasculitis. Am J Clin Dermatol. 2014 Dec;15(4):299–306.