Dermatologic Diagnosis: Leukocytoclastic Vasculitis

Joseph Einhorn, MD; Joel T Levis, MD, PhD, FACEP, FAAEM

Perm J 2015 Summer;19(3):77-78
http://dx.doi.org/10.7812/TPP/15-001

Leukocytoclastic vasculitis (LCV), also termed hypersensitivity vasculitis, is a small-vessel vasculitis with a reported incidence rate of about 30 cases per million people per year and is thought to affect men and women in equal numbers.[1,2] The skin is the organ most commonly involved in LCV. Typical presentation is a painful, burning rash predominantly in the lower extremities (Figure 1), with up to one-third of patients presenting with trunk and upper extremity involvement.[3] The most common skin manifestation of LCV is palpable purpura.[1-3] Other skin manifestations include maculopapular rash, bullae, papules, plaques, nodules, ulcers, and livedo reticularis.[4] Patients with LCV may also present with arthralgias or arthritis involving the knees or ankles.[4] The differential diagnosis for LCV includes drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome, amyloidosis, antiphospholipid syndrome, atrial myxoma, Behcet disease, Churg-Strauss syndrome, granulomatosis with polyangiitis, Henoch-Schonlein Purpura, urticarial vasculitis, immune thrombocytopenic purpura, and meningococcemia.[5] Multiple etiologic factors including drugs, infections, foods, autoimmune diseases, collagen vascular diseases, and malignancies have been associated with LCV.[1] Although the exact pathogenic mechanism remains to be elucidated, circulating immune complexes are believed to be involved.[6]

In the evaluation of patients with LCV, laboratory tests including a complete blood count, erythrocyte sedimentation rate, biochemistry profile with liver and renal function, and urinalysis are useful in excluding other vasculitides, determining the presence of systemic disease, and identifying an associated disorder, which can provide prognostic information.[4] Patients with suspected LCV presenting to the Emergency Department may require parenteral analgesics for pain control, and those patients not requiring hospitalization should be referred to a dermatologist upon discharge. Diagnosis of LCV is confirmed on histologic examination of a biopsy from the affected area that demonstrates perivascular and vascular leukocytic infiltrates along with fibrinoid necrosis.[1] Mild, skin-limited LCV does not require treatment apart from rest, elevation of the legs, ice packs to the affected area, and removal or treatment of the inciting cause.[7] Presence of arthralgia or arthritis requires use of nonsteroidal antiinflammatory drugs, or a short course of oral steroids (eg, prednisone or methlprednisolone) at a dose of 1 mg/kg/day for 4 weeks followed by a steroid taper. Most patients respond to such treatment.[8] A single-pulse dose of intravenous corticosteroids (eg, methylprednisolone, 15 mg/kg) may be required, followed by oral corticosteroids in more severe cases. Colchicine has also reportedly been useful in patients with skin and joint symptoms, though success in a small, randomized controlled trial was limited.[9] Colchicine should be used with caution in persons with kidney disease and in pregnant women. Most patients with cutaneous leukocytoclastic vasculitis are treated in an outpatient setting. Inpatient care is needed in patients who have severe systemic vasculitic syndromes and severe organ dysfunction. In the absence of internal involvement, the majority of cases of LCV resolve within weeks to months, with approximately 10% of patients experiencing chronic or recurrent disease.[10] ❖

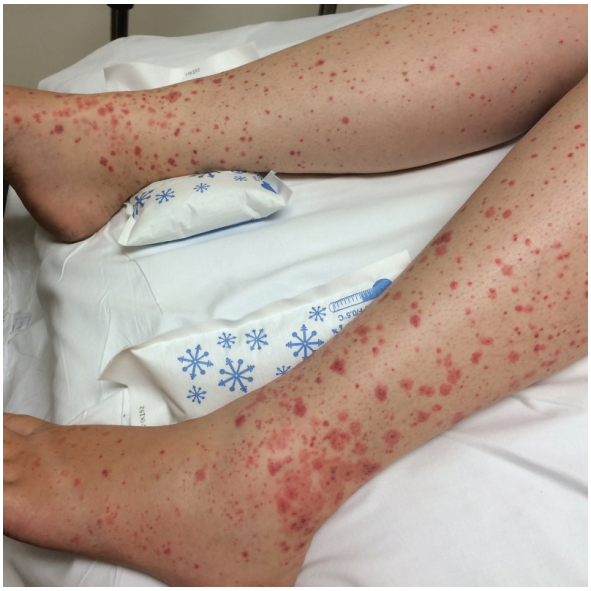

Figure 1. Lower extremities of a 31-year-old woman presenting to the Emergency Department. The patient reported several days of arthralgias and a moderately painful, burning rash involving the legs and extending to the lower abdomen, preceded by a viral syndrome.

This image demonstrates nonblanching palpable purpura to the lower extremities with some areas coalescing to form plaques. Findings are consistent with leukocytoclastic vasculitis.

Joseph Einhorn, MD, is an Emergency Medicine Resident in the Stanford/Kaiser Emergency Medicine Residency Program in CA. E-mail: jeinhorn@stanford.edu. **Joel T Levis, MD, PhD, FACEP, FAAEM,** is a Senior Emergency Physician at the Santa Clara Medical Center, and Clinical Assistant Professor of Emergency Medicine (Surgery) at Stanford University. He is the Medical Director for the Foothill College Paramedic Program in Los Altos, CA. E-mail: joel.levis@kp.org.

References

1. Hussain N, Mustafa U, Davis J, et al. Indomethacin-related leukocytoclastic vasculitis: a case report and review of literature. Case Rep Dermatol 2013 Jan;5(1):33-7. DOI: http://dx.doi.org/10.1159/000348240.
2. González-Gay MA, García-Porrúa C. Systemic vasculitis in adults in northwestern Spain, 1988-1997. Clinical and epidemiologic aspects. Medicine (Baltimore) 1999 Sep;78(5):292-308.
3. Brown K, Martin J, Zito S. Severe leukocytoclastic vasculitis secondary to the use of naproxen and requiring amputation: a case report. J Med Case Rep 2010 Jul 1;4:204. DOI: http://dx.doi.org/10.1186/1752-1947-4-204.
4. Martinez-Taboada VM, Blanco R, Garcia-Fuentes M, Rodriguez-Valverde V. Clinical features and outcome of 95 patients with hypersensitivity vasculitis. Am J Med 1997 Feb;102(2):186-91. DOI: http://dx.doi.org/10.1016/S0002-9343(96)00405-6.
5. Gibson LE. A review of cutaneous vasculitis. Journal of the Egyptian Women's Dermatologic Society 2004;1(1):1-15.
6. Mackel SE, Jordon RE. Leukocytoclastic vasculitis. A cutaneous expression of immune complex disease. Arch Dermatol 1982 May;118(5):296-301. DOI: http://dx.doi.org/10.1001/archderm.1982.01650170010012.
7. Binamer Y. Dermacase. Can you identify this condition? Drug-induced leukocytoclastic vasculitis. Can Fam Physician 2013 Jul;59(7):748, 750-1.
8. Fiorentino DF. Cutaneous vasculitis. J Am Acad Dermatol 2003 Mar;48(3):311-40. DOI: http://dx.doi.org/10.1067/mjd.2003.212.
9. Sais G, Vidaller A, Jucglà A, Gallardo F, Peyrí J. Colchicine in the treatment of cutaneous leukocytoclastic vasculitis. Results of a prospective, randomized controlled trial. Arch Dermatol 1995 Dec;131(12):1399-402. DOI: http://dx.doi.org/10.1001/archderm.1995.01690240061009.
10. Loricera J, Calvo-Río V, Ortiz-Sanjuán F, et al. The spectrum of paraneoplastic cutaneous vasculitis in a defined population: incidence and clinical features. Medicine (Baltimore) 2013 Nov;92(6):331-43. DOI: http://dx.doi.org/10.1097/MD.0000000000000009.

Medicine

The critical sense and sceptical attitude of the Hippocratic school laid the foundations of modern medicine on broad lines, and we owe to it: *first,* the emancipation of medicine from the shackles of priestcraft and of caste; *secondly,* the conception of medicine as an art based on accurate observation, and as a science, an integral part of the science of man and of nature; *thirdly,* the high moral ideals, expressed in that most "memorable of human documents" (Gomperz), the Hippocratic oath; and *fourthly,* the conception and realization of medicine as the profession of a cultivated gentleman.

— Sir William Osler, MD, 1st Baronet, 1849-1919, Canadian physician and one of four founding professors of Johns Hopkins Hospital