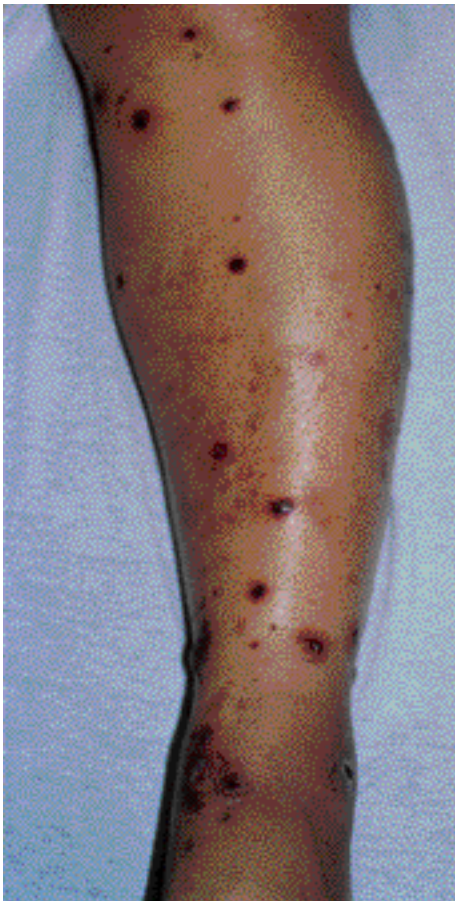
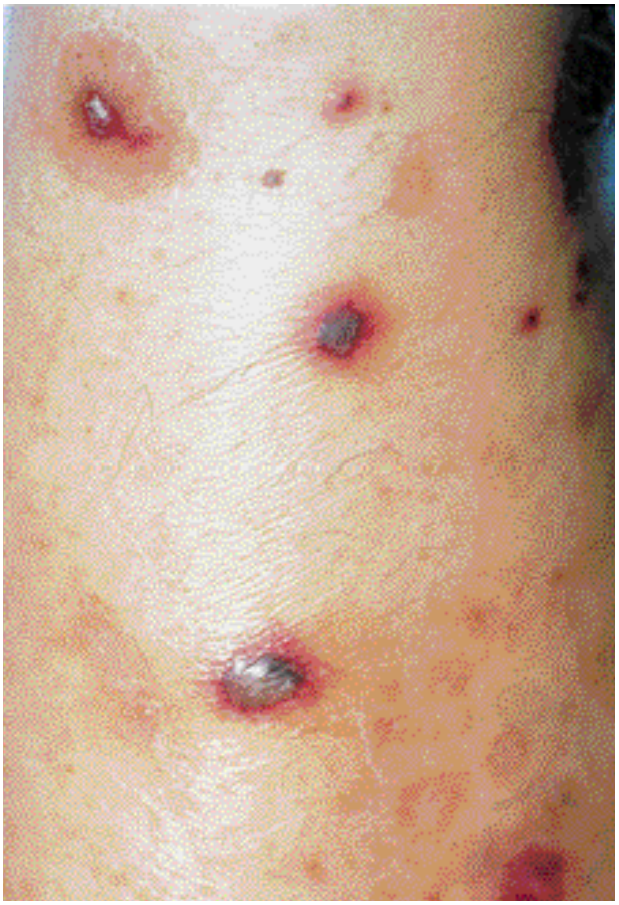
What Is Your Diagnosis?





A 41-year-old woman presented with a 1-month history of tender vesicles on her legs. She recently was diagnosed with hepatitis C, and laboratory results showed marked renal compromise. Hemorrhagic papules and vesicles were present on her legs and the arches of her feet.

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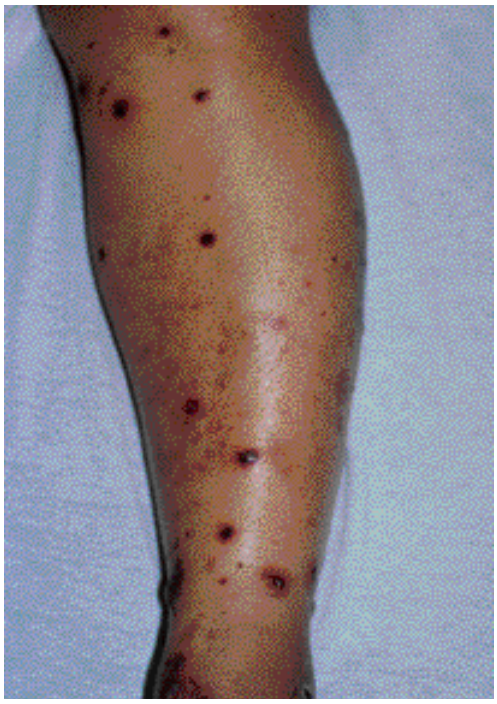
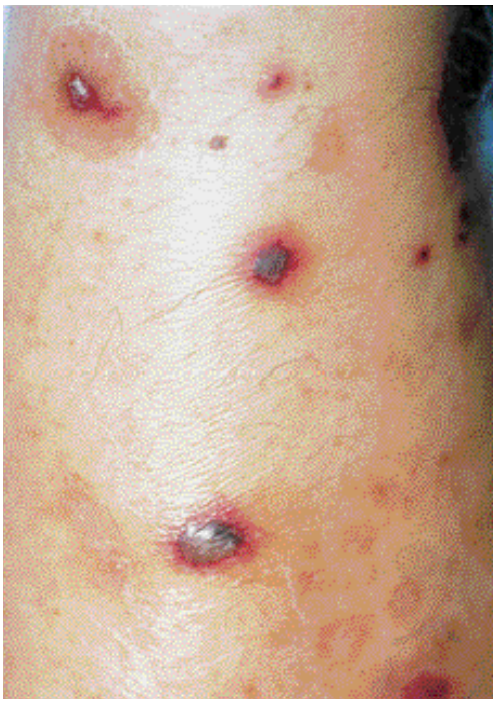
The Diagnosis: Mixed Cryoglobulinemia Due to Hepatitis C Infection





Cryoglobulins are immunoglobulins that reversibly precipitate at cold temperatures. Cryoglobulinemia can be divided into 3 types based on the immunoglobulins involved. Type I cryoglobulinemia is characterized by monoclonal immunoglobulin involvement and is associated with such diseases as multiple myeloma, Waldenstrom macroglobulinemia, and chronic lymphocytic leukemia. Type III cryoglobulinemia is characterized by polyclonal immunoglobulin components and is associated with rheumatologic diseases, biliary cirrhosis, and certain viral infections, including hepatitis C. Type II cryoglobulinemia is characterized by both monoclonal and polyclonal immunoglobulin components and, as such, can be associated with both the lymphoproliferative diseases linked with type I cryoglobulinemia and the rheumatologic and infectious diseases linked with type III cryoglobulinemia.[1]

Clinically, types II and III (the mixed cryoglobulinemias) are characterized by the triad of palpable purpura, arthralgias, and weakness.[2] About 80% of patients with mixed cryoglobulinemia have an underlying hepatitis C infection,[2] and up to 60% demonstrate significant renal involvement, usually in the form of a membranoproliferative glomerulonephritis.[1] Histologically, in type I cryoglobulinemia, cryoprecipitates typically are evident in routine skin biopsy results, whereas skin biopsy results from patients with the mixed cryoglobulinemias often reveal a nonspecific leukocytoclastic vasculitis.

The treatment of choice for cryoglobulinemia is based on the severity of disease. Mild dermatologic symptoms may be improved with nonsteroidal anti-inflammatory agents and topical preparations such as topical corticosteroids. Internal disease may necessitate chemotherapeutic agents or plasmapheresis. In the case of mixed cryoglobulinemia secondary to hepatitis C infection, antiviral therapy for the underlying infection may be helpful.[3]

REFERENCES

1. Cornelius LA, Lawley, TJ. Cryoglobulinemia and cryofibrinogenemia. In: Freedburg IM, Eisen AZ, Wolff K, et al, eds. *Fitzpatrick's Dermatology in General Medicine*. Vol 1. 5th ed. New York, NY: McGraw-Hill; 1999:2053-2058.
2. Bonkovsky HL, Mehta S. Hepatitis C: a review and update. *J Am Acad Dermatol*. 2001;44:159-182.
3. Dupin N, Chosidow O, Lunel F, et al. Essential mixed cryoglobulinemia. a comparative study of dermatologic manifestations in patients infected or noninfected with hepatitis C virus. *Arch Dermatol*. 1995;131:1124-1127.