



Pseudovasculitis: an etiology not to miss

Scott A. Elman¹ · Daniel R. Mazori¹ · Joseph F. Merola^{1,2}

Received: 19 November 2020 / Revised: 10 December 2020 / Accepted: 13 December 2020 / Published online: 16 January 2021
© International League of Associations for Rheumatology (ILAR) 2021, corrected publication 2021

Presentation

A 63-year-old male with dementia was referred to dermatology with a rash concerning for vasculitis. He denied itch or pain from the rash but noted pain at his right calf. On examination, there were peri-follicular purpuric macules and hyperkeratotic papules with corkscrew hairs. Conjunctival hemorrhage, hemorrhagic gingivitis, splinter hemorrhages, and a large ecchymosis with ultrasound-confirmed hematoma of the right calf were noted (Fig. 1a, b). On review, his wife shared that his diet had been limited since he developed dementia, consisting exclusively of grains and dairy. Given the physical findings and history of restricted diet, a presumptive diagnosis of scurvy was made. An undetectable serum ascorbic acid level, < 0.1 mg/dL confirmed the diagnosis. The patient was started on ascorbic acid 1000 mg daily; his rash improved after 2 weeks of supplementation and resolved after 6 weeks.

Discussion

Vitamin C is an essential water-soluble vitamin exclusively obtained through diet, it is essential for collagen synthesis, and its deficiency leads to impaired collagen synthesis and capillary fragility [1]. Vitamin C deficiency is rare in the developed world and is typically seen in patients with alcohol use disorder, restrictive dieting, psychiatric disease, dementia, and malabsorptive diseases. The first manifestation of vitamin C deficiency is typically fatigue. Corkscrew hairs with perifollicular petechiae are pathognomonic for scurvy [2]. Musculoskeletal manifestations including arthralgias, particularly in the knees, ankles, and wrists, as well as myalgias, are seen in up to 80% of patients. Hemarthroses are also commonly seen and may be the initial chief complaint of the patient [3]. Hemarthroses have been found to occur mainly in the hips, knees, and ankles and are believed to be the result of

✉ Joseph F. Merola
jfmerola@bwh.harvard.edu

¹ Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, 221 Longwood Ave, Boston, MA, USA

² Division of Rheumatology, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, 221 Longwood Ave, Boston, MA, USA

Fig. 1 Cutaneous manifestations of vitamin C deficiency. **a** Perifollicular purpuric macules and hyperkeratotic papules with corkscrew hairs. Splinter hemorrhages. **b** Gingival hemorrhage



damage to synovial blood vessels and microfractures [4]. More rare musculoskeletal manifestations include regional transient osteoporosis [5]. Early recognition of key physical findings is important to ensure prompt treatment.

Author contributions All authors contributed equally to the conception and design of this submission. SAE primarily drafted the manuscript. DRM and JFM both read, edited, and approved the submission in its final form.

Data availability All authors had access to data and materials included in this submission.

Compliance with ethical standards

Disclosures None.

Ethics approval N/A

Consent to participate Consent was obtained from our patient to obtain photographs.

Consent for publication Consent was obtained from our patient to publish this case with its associated photographs.

Code availability N/A

References

1. Lipner S (2018) A classic case of scurvy. *Lancet* 392:431
2. Hirschmann JV, Raugi GJ (1999) Adult scurvy. *J Am Acad Dermatol* 41:895–906
3. Pangan AL, Robinson D (2001) Hemarthrosis as initial presentation of scurvy. *J Rheumatol* 28:1923–1925
4. Fain O (2005) Musculoskeletal manifestations of scurvy. *Joint Bone Spine* 72:124–128
5. Rodríguez S, Paniagua O, Nugent KM, Phy MP (2007) Regional transient osteoporosis of the foot and vitamin C deficiency. *Clin Rheumatol* 26:976–978

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.