

A Case Series of Scurvy Presenting as Bruising

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Introduction

Vitamin C is essential in collagen formation, leukocyte function and other enzymatic processes. Defects in collagen disrupt the integrity of hair, connective tissue, and blood vessels, leading to characteristic cutaneous manifestations of scurvy [1]. Scurvy is often considered a historic disease, associated with gingivitis, loose teeth and fatigue. A recent review showed that available evidence indicates that vitamin C deficiency is common in low- and middle-income countries and not uncommon in high income settings [2]. This case series describes scurvy manifesting as unexplained bruising, highlighting that although challenging to recognize due to a low index of suspicion, scurvy should remain within our differential as it is easy to diagnose and treat, once considered.

Case Presentation

Patient #1 is a 22-year-old female, with history of panproctocolectomy and end-ileostomy formation for Crohn. She

was taking daily Vitamin B, C and D supplementation. She reported a 4 month history of widespread bruising. Physical examination revealed extensive ecchymoses on her lower limbs (Figure 1), abdomen and flanks bilaterally. Laboratory investigations were grossly normal, except for a low level of vitamin C measuring 3 mg/L (reference range 4 – 15 mg/L). We increased the dose of her vitamin C supplementation to 2000 mg daily for 3 months and her ecchymoses resolved. This patient's history of extensive bowel resection is likely responsible for her vitamin C deficiency.

Patient #2 was an 81-year-old female with a background diagnosis of mycosis fungoides on treatment with bexarotene. On routine review she complained of nausea, diarrhea, bilateral swollen lower legs and ecchymoses. Bexarotene was held. Her nausea and diarrhea settled but a cause for her bruising and oedema remained elusive. Laboratory investigations were normal except a vitamin C level returned as 3 mg/L (reference range 4 – 15 mg/L). We commenced 1000 mg/day of vitamin C and her ecchymoses and oedema resolved one month later.

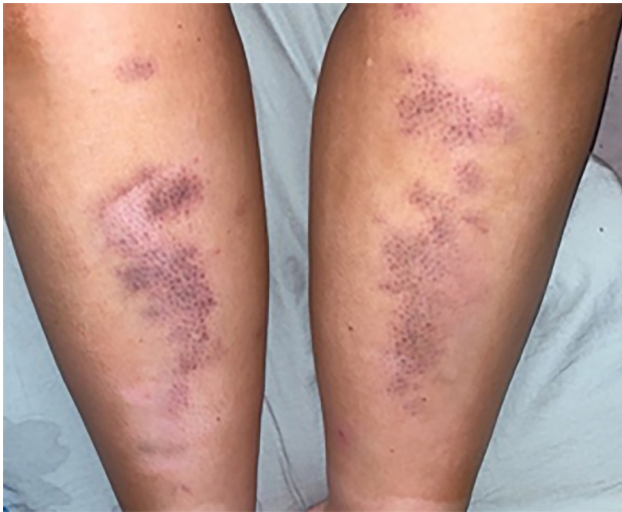


Figure 1. Patient #1. Bilateral perifollicular purpura on lower limbs.

Patient #3 is a 77-year-old female with a history of lupus, Sjogren syndrome, pulmonary fibrosis and Crohn disease. Extensive facial ecchymoses (Figure 2) were noted at routine review. A skin biopsy from her left cheek revealed red cell extravasation in the upper dermis but no vasculitis or features suggestive of lupus and a DIF was negative. Once again, investigations found a Vitamin C level of 3 mg/L (reference range 4-15mg/L). Similarly, Vitamin C 1000 mg/day was started and her symptoms improved.

Conclusions

Clinical manifestations of scurvy typically occur within 12 weeks of inadequate intake. Risk factors include low socioeconomic status, alcoholism or illness predisposing patients to poor oral intake [4]. Ecchymosis, perifollicular purpura, corkscrew hairs and easy wound breakdown are key cutaneous findings, however bruising in isolation, as in the case of our patients, may make the diagnosis more challenging. Follicular hyperkeratosis and perifollicular hemorrhage are pathognomonic on examination [3]. Scurvy is often considered to have a relatively benign symptomatology but late stage deficiency can be severe; reported manifestations include generalized edema, jaundice, spontaneous bleeding, neuropathy, fever, convulsions, and death [4]. One published report discusses cardiac tamponade caused by scurvy [5].



Figure 2. Patient #3. Facial ecchymoses.

We recommend keeping scurvy within the differential when considering indistinct presentations. Patients typically see resolution of symptoms within weeks of commencing supplementation.

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