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A Unique Presentation of Scurvy in the Modern Era

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INTRODUCTION

Although rare in modern times, scurvy can present among children or elderly with malabsorptive syndromes, poor nutritional intake, anorexia, bulimia, or those with end stage renal disease requiring hemodialysis. Ascorbic acid plays an important role in collagen production, bone formation, activation of vitamin B, protection from free radical damage, immune protection, and wound repair. While once common among sailors, hypovitaminosis especially among water – soluble vitamins such as vitamin C is a rare occurrence and one that can present as a diagnostic dilemma. Below is a case of a middle-aged male without typical risk factors who was diagnosed with severe ascorbic acid deficiency after an extensive workup for other causes. The purpose of this report is to highlight the importance of proper history taking that can aid in the early diagnosis and treatment of nutritional deficiencies, thereby reducing overall cost and length of hospital stay for such patients.

CASE SUMMARY

A 47-year-old male with history of anxiety/depression presented with two weeks of progressively worsening bilateral lower extremity ecchymosis and aches with associated non-specific flank pain, dark yellow urine, subjective fevers, and chills. Patient denied recent aspirin or NSAID use, trauma, and blood in stool, urine, sputum, or gums. He is an unemployed, former smoker with a penicillin allergy. Patient denied any illicit drug or alcohol and nicotine abuse. Physical exam revealed a thin and flat affect. Pupils were anicteric and oral mucosa was dry without lesions. Cardiopulmonary exam was unremarkable.

Tenderness was noted to the left upper quadrant and epigastric region on palpation. Abdomen was, however, soft, non-distended with active bowel sounds. Although patient was able to move all extremities, he was found to have 3/5 motor strength that limited his gait. His sensation remained intact. Diffuse ecchymoses were noted as shown in Image 1 and 2 along both anterior and posterior aspect of the bilateral lower extremities, sparing the feet. There was mild pretilial edema of his LLE. No obvious deformities were noted. A full workup was initiated. Urine drug screen was positive for MDMA and benzodiazepine. Initial lab work revealed Hb 4.7, K 2.8, elevated total bilirubin (1.5) with normal AST, ALT, and alkaline phosphatase. ESR,CRP, and D-Dimer were elevated. The remainder of his initial labs including CBC, creatinine, ion studies, creatinine kinase, and fibrinogen levels were within normal limits. CT abdomen/pelvis revealed an ileus pattern involving the small bowel over the course of his hospital stay. Rheumatologic workup included cryoglobulin, rheumatoid factor, ANA screen, anti-dsDNA antibody, C3, and C4 was all negative. He was found to have low factor V and factor X levels with normal factor VII and factor IX. His platelet function assay was obtained due to unclear medication history and was normal. He continued to have lower extremity weakness but was able to tolerate diet and work with physical therapy. At this point in his workup, the initial history was revisited and additional questions were asked. Patient was reluctant to provide details of his diet at first, but finally admitted to having a very specific diet of food-borne allergic reaction. A serum vitamin C level was obtained and was notably 0.0µmol/L. After starting vitamin C supplementation, patient’s total bilirubin began to trend down, his bilateral ecchymoses began to resolve, and H/H remained stable without further transfusions. Within days, he recovered motor strength and was ambulating with minimal assistance by discharge.

CLINICAL FINDINGS AND IMAGING

Dietary intake of 100mg/day of vitamin C has long been recommended to prevent inflammatory states. Vitamin C is involved in a number of body functions from collagen production to neurotransmitter biosynthesis. In this case, the severe lack of vitamin C due to self-imposed dietary restrictions resulted in anemia with bilateral lower extremity weakness and purpura. The diagnosis was made after a lengthy hospital stay for the patient who required blood transfusions in the ICU where both hematology and rheumatology were consulted. Most of this workup was negative, and ultimately, revisiting the initial history after building a professional relationship with the patient aided in the diagnosis of severe ascorbic acid deficiency. This patient was unique in that he lacked typical underlying disease states such as malabsorption or end stage renal disease requiring hemodialysis that could have pointed towards ascorbic acid deficiency. Supplementation resulted in a remarkable improvement of his overall symptoms over a short period of time.

REFERENCES


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