What's Your Diagnosis?

A Modern Tale of Scurvy

By Flavio Habal, MD, PhD, FRCP

A⁷¹-year-old female was referred for assessment of weakness, fatigue, and petechial rash over the lower trunk.

Aside from a long-standing history of epigastric burning,

she had been relatively healthy. Her epigastric pain was often aggravated with raw vegetables and fruit, which she avoided. She had mostly a bland diet. She has taken an occasional acetylsalicylic acid for headaches, otherwise she takes no medications. She drinks a minimal amount of wine, she is a

non-smoker and has no known allergies. Both of her parents lived until their nineties. She has three siblings and four healthy children.

Six months prior to her visit, she developed progressive fatigue with occasional palpitation. Her epigastric burning pain worsened and antacids, including omeprazole were not very helpful. An upper gastrointestinal series was reported to be normal. She developed episodes of pounding headaches. Her joints became very achy, although there was no swelling. She began taking ibuprofen for her joints and her headaches, and lorazepam for sleep. She developed sore gingivae with frequent episodes of gum bleeding. She had lost four teeth during that period. Over the subsequent months, she developed a non-pruritic rash over the buttock and lower extremities.

On physical examination, she appeared pale and frail. She was tachycardic at 105 beats per minute. Her oral cavity revealed swollen gums with some loose teeth. She had no palpable lymph nodes and her thyroid was smooth and symmetric. Her lungs were clear and her heart sounds were normal to the formula of the same transfer of the same transfer

Patient Stats Hemoglobin 86 g/L White Blood Count 3.2 bil/L Platelet count 259 bil/L Blood film Slight fragments Prothrombin time (INR) 0.9 to 1.3 Ferritin 105 µg/L Vitamin B₁₂ Normal ANA Positive 1:320 (with a speckled pattern) Rheumatoid Factor Negative

mal, aside from a mild systolic murmur. Her abdomen was soft and scaphoid with few striae.

Over her buttock and lower extremities, she had diffuse ecchymosis, as well as petichiae and perifollicular hemorrhages. She had normal neurologic findings.

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Answer: Scurvy

This patient presents a classic history of scurvy. Although dietary deficiencies in healthy individuals in North America are rare, they do occur. This patient avoided



Dr. Habal is active staff, University Health Network at the Toronto General Hospital, and associate professor, University of Toronto, Toronto, Ontario. vegetables and fruit because of epigastric pain, which could be secondary to dyspepsia or reflux. Vitamin C is an important vitamin required in the synthesis of collagen and elastin. Deficiency of this vitamin results in impaired collagen synthesis resulting in weakening of capillaries, which results in the development of petechiae, poor wound healing, and bony abnormalities. This deficiency results in hemorrhages in the tissue, bleeding from the gums, loosening of



the teeth, anemia with weakness, fatigued muscles, and joint pain.

Petechiae may develop in patients with blood dyscrasias. In this patient, aside from her anemia, all her hematologic parameters were normal indicating another process. Other causes for skin lesions include vasculitis. This condition may present with similar presentation to scurvy, but can also present with multisystem symptoms, such as fever, fatigue, and arthritis. Frequently, it is associated with elevated sedimentation rate, elevated platelet counts, and white blood

Deficiency occurs within two to three months after deprivation of vitamin C.

tests. Immune complexes or antibodies that cause vasculitis can be identified in the

circulation. Complement levels may be abnormal. Patients require immunosuppressive therapy, such as corticosteroids.

Dietary history is very crucial when a patient presents with such a history. Vitamin C is not synthesised in humans since they lack the enzyme necessary for its synthesis. Therefore, vitamin C must be taken regularly through diet or supplements. Deficiency occurs within two to three months after deprivation of vitamin C. The recommended daily allowance of vitamin C is 60 mg to 75 mg. Within two to three weeks of supplementation, the skin lesions tend to disappear.

