

Bleeding in Alcohol-Related Cirrhosis: An Unexpected Cause

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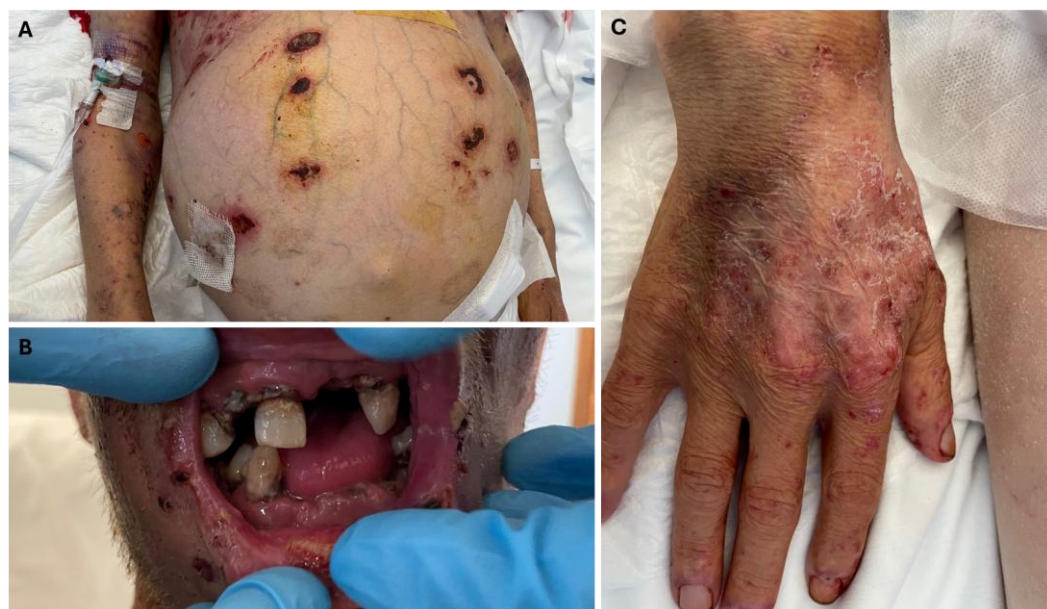


Figure 1: A. Large volume ascites, collateral circulation, and skin lesions. B. Swollen and bleeding gums, with associated loosened teeth. C. Skin lesions: active bleeding, as well as ecchymoses and petechiae.

A 42-year-old male with alcohol-related cirrhosis (Child-Pugh C), who maintained alcohol consumption and had severe caloric intake deficiency, presents to the emergency department with a history of melena and syncope. Initial evaluation was performed in the emergency room because of hypovolemic/haemorrhagic shock, demanding aggressive fluid resuscitation and blood transfusion. Physical examination revealed ascites (Figure 1A), profusely bleeding gums (Figure 1B) and multiple macular skin lesions in the chest and limbs, with active bleeding, as well as ecchymoses and petechiae (Figure 1C). Hair appeared thin and rare, with several areas of alopecia. Blood tests were significant for normocytic/normochromic anaemia (haemoglobin 5.5 g/dL), thrombocytopenia (platelet count $34.000 \times 10^3/\mu\text{L}$), and severe liver dysfunction (total bilirubin 10.3 mg/dL, direct bilirubin 4.7 mg/dL, INR 2.59, and albumin 1.6 g/dL). Upper endoscopy did not identify a gastrointestinal source but was positive for massive active bleeding in the oral cavity.

After admission, further investigation demonstrated normal vitamin K, and a severe deficiency of vitamins A (0.03 $\mu\text{mol/L}$), B1 (60 nmol/L), B9 (1.9 nmol/L), B12 (51 pg/mL), E (5.3 $\mu\text{mol/L}$) and C (0.5 mg/L). The latter favoured a diagnosis of scurvy, because of dietary intake deficiency. Bleeding gums were also considered to be associated with vitamin C deficiency, further aggravated by liver dysfunction with coagulopathy, as an indispensable cofactor. Multivitamin therapy was initiated, with significant improvement of skin and oral lesions. Both the initial response to blood transfusions and the clinical improvement with vitamin C supplementation do not favour the diagnosis of disseminated intravascular coagulation. The patient later developed acute-on-chronic liver failure and eventually died.

Vitamin C is an essential cofactor for collagen biosynthesis, carnitine and catecholamine metabolism, and dietary iron absorption. Humans are unable to synthesize vitamin C, and its levels strictly depend on dietary intake of fruits and vegetables [1]. Phrynoderma, perifollicular haemorrhage and purpura are manifestations of vitamin C deficiency [2]. Nutritional deficiencies are very common in patients with alcohol use disorder [3]. However, there are few reported cases in the literature of an association between scurvy and alcohol-related cirrhosis [4, 5]. Although it is difficult to precisely identify the relative contribution of each pathology for the bleeding episode, it is important to consider the diagnosis of scurvy, since it is a reversible cause.

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Research Ethics Committee Approval: We declare that the patient approved the study by signing an informed consent form and the study followed the ethical guidelines established by the Declaration of Helsinki.

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Conflicts of Interest: None.

Supplementary Materials: None.

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