CASE REPORT

Oral manifestation of thrombocytopenia in immunosuppressed patient - Report of case

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Abstract:

Thrombocytopenia (or thrombopenia) is a relative decrease of platelets in blood. This condition is associated with increased mortality rates in critically ill patients. It is especially present in cases of sepsis, but can also be caused by medications or associated with the use of foreign materials. Many physiological mechanisms (immune-mediated, consumption or destruction) are involved in the decrease of platelet count. This manuscript describes a case of severe thrombocytopenia with oral manifestation in immunosuppressed patient. A 39-year-old male was admitted to the Hospital Oswaldo Cruz complaining of bleeding in the lower lip. Epistaxis, crusts on the lips and red lesions in the hard palate were observed.

Keywords: acquired immunodeficiency syndrome; lood platelets; platelet count; thrombocytopenia.

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INTRODUCTION

Platelets are not actually cells but rather small fragments of cells. Normal human platelet count ranges from 150,000 to 450,000 platelets per microlitre of blood[1]. A higher than normal number of platelets can cause unnecessary clotting, which can lead to strokes and heart attacks. Thrombocytopenia occurs when the amount of blood platelets is less than 150,000 mm^3. Clinical evidence of thrombocytopenia typically not observed until the platelet levels fall below 100,000 mm^3.[2]

Patients with thrombocytopenia have a greater tendency to bleeding present, depending on the cause thrombocytopenia, and the total number of platelets. A diagnosis of thrombocytopenia is reached in patients with a low platelet count and following elimination of possible secondary causes, such as: exposure to substances (drugs, vaccines, herbs and foods); lymphoproliferative disorders; infection (including hepatitis C, HIV, cytomegalovirus); bone marrow transplant; and systemic lupus erythematosus[3-4].

The condition is usually first noticed because of oral lesions. The minor traumatic events occur continuously in the oral mucosa during chewing and swallowing. Clinically, patients present with hemorrhagic lesions resulting from the leakage of small blood vessels and depending on the amount of extravasated blood may occur petechiae, bruising and hematomas[5]. The aim of this article is describe a case of severe thrombocytopenia with oral manifestation.

REPORT OF CASE

A 39-year-old male was admitted to the Hospital Oswaldo Cruz (Curitiba-PR/Brazil), complaining of bleeding and oral soreness. Chronic cough, weight loss, appetite loss, fever, and spontaneous oral and nasal bleeding were reported during anamnesis. Five months ago he has been tested for tuberculosis (-) and HIV (+) quick test. Intraoral examination revealed ulcers covered with crusts on the vermillion of the upper and lower lip (Figure 1) and blood clots on the tongue (Figure 2). The patient reported that he had persistent high fever, which caused the dryness and the appearance of cracks on the lips. Since then, a continuous bleeding started in the lower lip. Initially, the patient tried to stop the bleeding by using a topical medication (Anaseptil® powder 10 g). The labial bleeding had a month of evolution. Thus, the patient sought medical care in a clinic that referred him to hospital.

The patient presented with fever (37.8°C) and continued with pallor and prostration. Then, the following diagnostic hypotheses were established: erythema multiforme or HSV infection. It was prescribed Acyclovir (500 mg, 8/8h). Hemogram, blood platelets counting, hemossedimentation rate, serology (HIV, HCV, HBV, cutaneous leishmaniose, CMV, HSV, and mononucleosis), VDRL, viral load, and CD4 counting were performed. Laboratory tests showed the following changes: anemia, leukopenia, thrombocytopenia (blood platelets counting = 108,000 mm^3), liver dysfunction, renal failure,

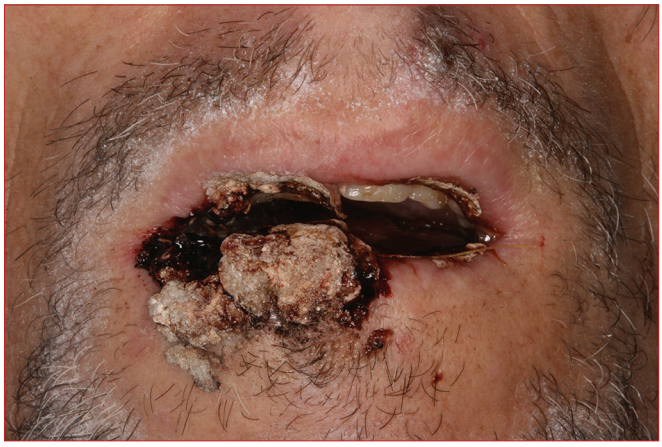

Figure 1. Crusted lesions in the lips.

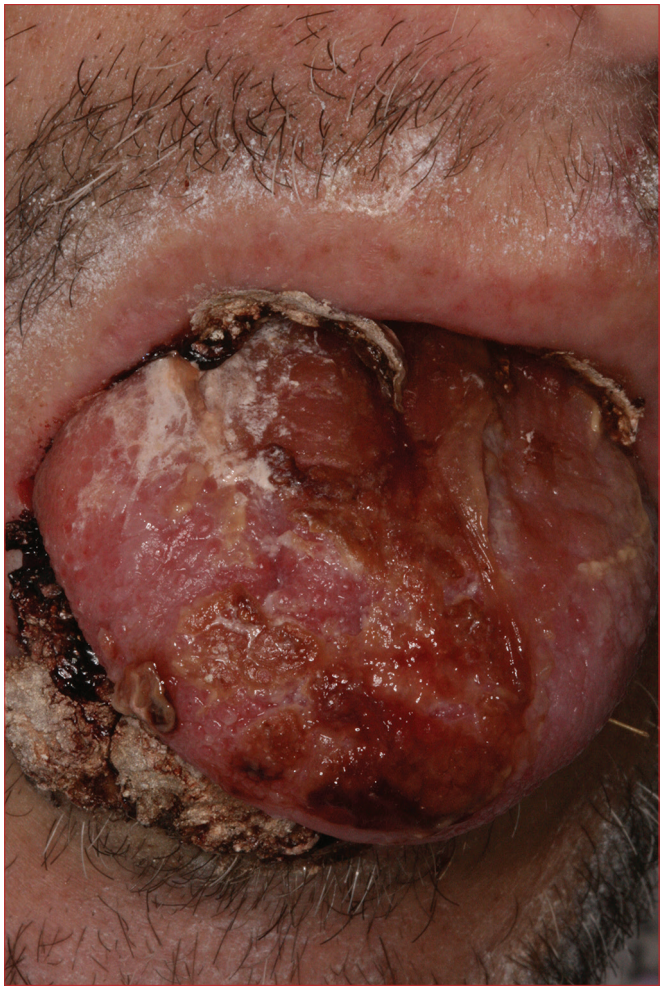

Figure 2. Blood clots on the tongue.

and hemossedimentation rate = 110. All serological tests were negative, except for HIV.

The patient continued to have bleeding from the nose and lips. Thus, the following treatment was instituted: transfusion of platelets (7 volumes), packed red cells (2 volumes) and fresh frozen plasma (3 volumes). Ice packs were applied on site. The patient was also treated with Kanakion® MM (20 mg). A suture was performed on the lower lip to stop the bleeding. One of the crusts of the lower lip was released and sent for histopathological examination. The material was represented by a hemorrhagic crust and there was no sign of infection.

Two weeks later, the patient showed a significant improvement of lesions on the lips and the framework of bleeding, which allowed a detailed examination of the mouth after removal of the denture. This examination showed that the patient had a reddish lesion on the soft palate, suggestive of Kaposi's sarcoma (Figure 3). Thus, an incisional biopsy was recommended. However, the biopsy was delayed due to the low amount of platelets and general health conditions. Highly active antiretroviral therapy (HAART) was instituted. The platelet counts returned to normal values within one week later. Furthermore, all oral lesions disappeared completely. Thus, the diagnosis of the oral manifestation resulting from HIV-associated thrombocytopenia was established.

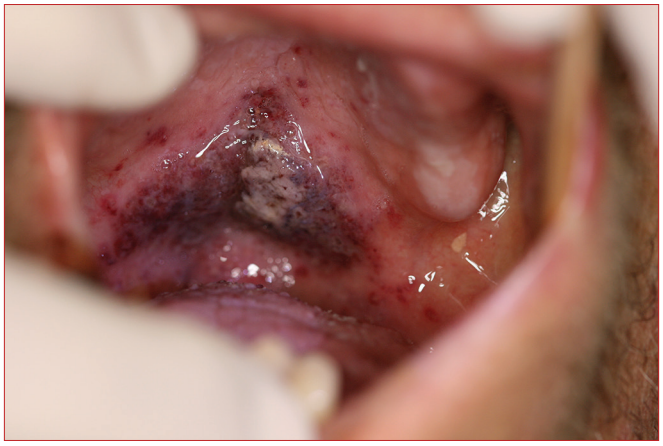

Figure 3. Reddish lesion in the hard palate.

DISCUSSION

This article presents a case report of a HIV patient with oral manifestations of thrombocytopenia. The appearance of clinical signs occurred after the patient has had high fever. Fever is a common systemic manifestation in patients with infectious diseases. It is a clinical syndrome characterized by feeling cold, shivering, fever and tachycardia, followed by sweating and diuresis in the period of resolution. Our experience has demonstrated that most patients with HIV/AIDS develop dryness and cracks on the lips after continuous and high fever. According to Patel et al.[6], fever is present in 86% of the HIV/AIDS patients.

Although patients may present with thrombocytopenia at any time during the course of HIV infection, from asymptomatic infection to advanced AIDS, the incidence of thrombocytopenia seems to increase with progressive immunosuppression[7-9]. Prevalence estimates of thrombocytopenia (< 150,000 platelets/μl) in the literature varied greatly but are generally above 10%[10]. Most patients with significant thrombocytopenia demonstrate a characteristic bleeding profile: spontaneous bruising, epistaxis, mucosal bleeding, petechiae, and excessive, prolonged menorragia. The clinician must also determine the bleeding site, bleeding duration and intensity, the relation to trauma or drugs, recent viral illnesses, and the presence of co-existing disease (for example, liver disease or malignancy)[2].

In this case report, the patient exhibited epistaxis, ulcers covered with crusts on the vermillion of the upper and lower lip and petechiaes in the hard palate. Both lesions on the lip and palate were associated with local trauma. The International Society on Thrombosis and Hemostasis suggests that bleeding should be considered clinically significant when there are two or more distinct bleeding sites such as the skin, nose, gums, vagina, gastrointestinal tract, or genitourinary tract; this includes spontaneous bleeding as well as provoked bleeding, such as occurs with dental work, parturition, trauma or surgery[11]. A bleeding history is also considered significant when there is only a single bleeding site so severe that it leads to red cell transfusions. Finally, significant bleeding is indicated by a single symptom recurring on three separate occasions[12].

HIV is also associated with thrombocytopenia and may be caused by a direct effect on megakaryocytes by the HIV virus. Anti-gp 120 antibodies and platelet-specific antibodies have also been reported on platelets in HIV-seropositive patients[13-14]. Moreover, liver disease predisposes for low TPO serum levels and mild thrombocytopenia. High retroviral activity predisposes for severe, immune thrombocytopenic purpura-like thrombocytopenia. At least two distinct categories of severe HIV-associated thrombocytopenia exist, one responsive to antiretroviral treatment and one non-responsive to antiretroviral treatment[15]. According to Firnhaber et al.[16], the prevalence of hematological abnormalities in untreated HIV-1 infection is independently related to factors such as geographic location, gender, and chronic co-infections.

Severe thrombocytopenia is a common cause of bleeding. It may result from decreased platelet production by the bone marrow or increased peripheral platelet destruction-sequestration. In a patient with thrombocytopenia, it is important to identify the underlying cause by careful clinical evaluation and laboratory investigations so that appropriate treatment can be

administered. Hospitalization should be strongly considered for any patient with extremely low platelet counts (< 5,000/μL) or with significant bleeding. The management of thrombocytopenia in intensive care will depend on the etiology. The first treatment will be applied causal treatment[17]. Then, the decision of platelet transfusion will be taken depending on the severity, etiology and risk of bleeding. Splenectomy continues to provide the highest cure rate (60-70% at 5+ years). Nonetheless, splenectomy is invasive, irreversible, associated with post-operative complications, and its outcome is currently unpredictable, leading some physicians and patients towards postponement and use of alternative approaches[18]. Subsequent studies showed improved platelet counts with antiretroviral therapy, in particular HAART[19-20], and this is now the initial treatment of choice for patients with HIV-associated immune thrombocytopenic purpura[21]. In many cases, platelet transfusion should also be given[22]. According to Guinat and Vicent[17], in most cases, the platelet counts returned to normal values after one week of hospitalization.

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