



Letter to Editor/Carta ao Editor

Pseudothrombocytopenia in schistosomiasis mansoni

Pseudotrombocitopenia na esquistossomose mansônica

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Dear Editor:

We wish to communicate the case of a young patient with schistosomiasis mansoni and pseudothrombocytopenia.

Pseudothrombocytopenia (PTCP) reflects an *in vitro* phenomenon of anticoagulant-activated platelet agglutination that results in spuriously low platelet counts by electronic counting machines. In most cases, the phenomenon is ethylenediaminetetraacetic acid — a calcium chelator — (EDTA)-dependent¹. With other anticoagulants, such as heparin and sodium citrate, this phenomenon is still possible, but rare.

Pseudothrombocytopenia is induced by agglutinating antibodies that cause *in vitro* platelet clumping by binding glycoprotein IIb/IIIa receptors on platelets. This phenomenon is most frequently observed in association with autoimmune, neoplastic, cardiovascular, and chronic liver diseases. EDTA-dependent PTCP is reported to occur in 0.2% of asymptomatic individuals, but the incidence may be as high as 1.9% in hospitalized patients.

Examination of the peripheral blood smear provides definitive evidence of PTCP in the form of overt platelet clumping. A simple, inexpensive, and quick diagnostic method consists of evaluating the platelet number in a blood sample immediately after blood withdrawal without using an anticoagulant. One can also use the citrate-containing tube to determine the correct number of platelets.

Case report: a 20-year-old male patient came to hospital for evaluation of thrombocytopenia (59,000 platelets/ml) discovered during a routine blood test performed in his hometown in the Northeast of Minas Gerais. He had no complaints. During examination, he appeared healthy. He narrated that he was treated for schistosomiasis with praziquantel (oral single dose) five years before the present admission to hospital. As he lived in an endemic area for schistosomiasis, hepatosplenic schistosomiasis with hypersplenism was the first hypothesis thought to explain his thrombocytopenia. An abdominal ultrasound revealed slight periportal fibrosis of the liver with no evidence of portal hypertension or splenomegaly. The upper digestive endoscopy revealed no esophageal varices. During the hospital stay, his platelet counts

varied: 35,000; 27,000; 93,000; 37,000; and zero (with clumping of platelets on the blood smear). The presence of clumping of platelets suggested the diagnosis of pseudothrombocytopenia. A blood sample, examined just after withdrawal in a citrated-containing tube, showed 153,000 platelets/ml.

This is the case of a patient with schistosomiasis and pseudothrombocytopenia admitted to hospital for clinical investigation of thrombocytopenia^{2,3}. Thrombocytopenia occurs when platelet count is below 150,000 per ml of blood. Failure to recognize PTCP leads to unnecessary diagnostic tests; unnecessary therapies, such as steroid administration and splenectomy; delay in treatment; and unwarranted exposure to transfusion-related complications. Additionally, the presence of PTCP can mask true thrombocytopenia^{4,5}.

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