



Platelet satellitism to granulated lymphocytes

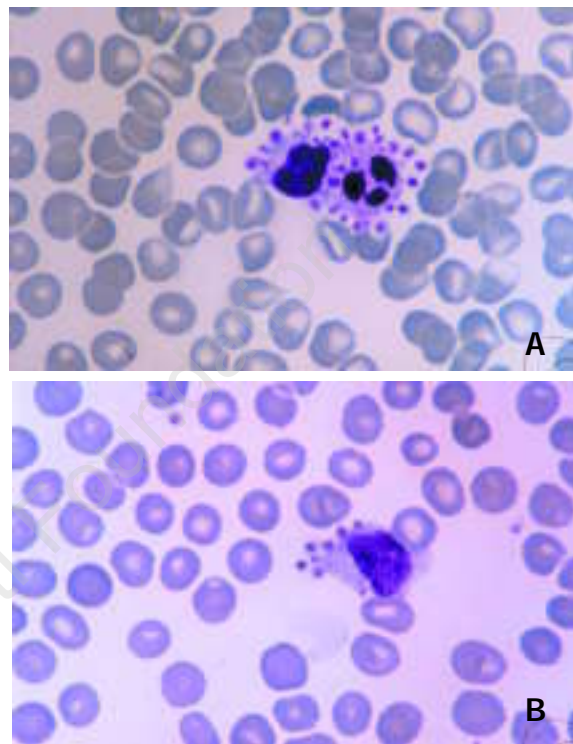
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A 74-year old woman complained of nausea and vomiting. Her platelet count was $74 \times 10^9/L$. EDTA peripheral blood smears showed platelet satellitism around neutrophils and, curiously, around granulated lymphocytes (Figures 1a and b). The remaining leukocytes were devoid of platelets. The dissolution of platelet-leukocyte rosettes and the presence of platelet aggregates followed blood incubation at $37^\circ C$. However, platelet antibodies were not detected with the immunofluorescence test.

A flow cytometer study was performed to determine the presence of Fc γ receptor III (CD16), the neutrophil receptor involved in platelet satellitism. We found that neutrophils and 10 % of lymphocytes were CD16+ (Figure 2). A serologic study revealed a HNA-1(a+b-) phenotype of the Fc γ receptor IIIb of neutrophils. IIb/IIIa and Ib/IX platelet membrane glycoproteins showed no differences with respect to controls.

Platelet satellitism has been considered an *in vitro* phenomenon among platelets and neutrophils, with occasional descriptions involving other leukocytes. In the present case, the combination of morphologic studies showing granulated lymphocytes with platelet satellitism and immunophenotypic studies displaying CD16 positivity indicates that lymphocytes with natural killer cell activity could exhibit platelet satellitism.



Figures 1. A and B: EDTA-anticoagulated peripheral blood smears. Platelet satellitism to polymorphonuclear neutrophils and granulated lymphocytes (May-Grünwald-Giemsa, x 1,000).

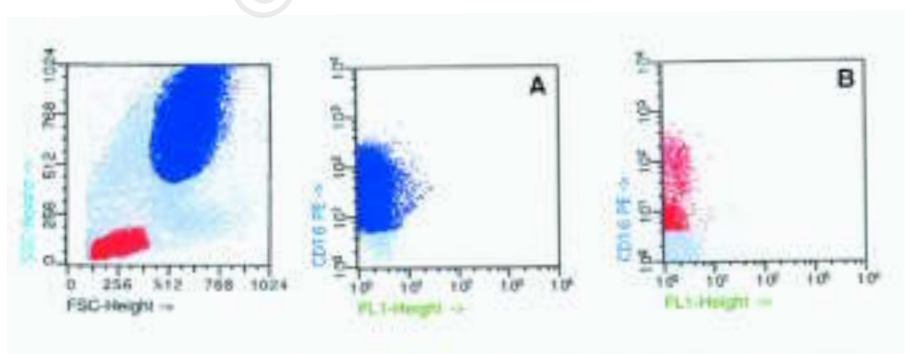


Figure 2. Immunophenotypic study reveals CD 16 positivity of neutrophils (A) and lymphocytes (B) of the patient.