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Abnormal Ultrastructure of the Platelet Plasma Membrane in Systemic Lupus Erythematosus

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Abstract

© 2016, Springer Science+Business Media New York. Systemic lupus erythematosus (SLE) is an autoimmune disease in which the body's immune system mistakenly attacks healthy tissue. It can affect the skin, joints, kidneys, brain, and other organs. Blood cells, including platelets, are also involved in SLE and contribute to the pathogenesis of disease. We studied ultrastructure of platelets isolated from the blood of SLE patients and found that the plasma membrane was rough and shaggy compared to the normally smooth cell surface. These changes in the membrane morphology increased with the disease severity and were more pronounced when SLE was associated with the antiphospholipid syndrome, suggesting that platelets are strongly affected by the immune reactions underlying SLE.

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Keywords

Platelet, Systemic lupus erythematosus, Transmission electron microscopy