PLATELET GLYCOPROTEIN

FUNCTION:
Platelet glycoprotein receptors are important to platelet function at both the early adhesion phase and the later stages of thrombus formation. Polymorphisms that regulate expression or activity could influence risk for adverse outcomes in any disease that compromises hemostasis. Platelet glycoprotein complex IIb/IIIa is expressed on different lineages of fetal progenitor cells and is involved in regulation of hematopoiesis.

ANTIBODIES APPEAR:
Arterial Thrombosis
Autoimmune Thrombocytopenia
Cardiovascular Disease
Coronary Artery Disease
Systemic Lupus Erythematosus

CLINICAL SIGNIFICANCE:
Autoantibodies against platelet glycoproteins (anti-GP) are found in the majority of patients with autoimmune thrombocytopenia (AITP) as well as in thrombocytopenia associated with systemic lupus erythematosus (SLE). AITP is an autoimmune disorder characterized by autoantibodies against platelet membrane glycoproteins, most commonly the glycoprotein IIb-IIIa and Ib-IX complexes; level of anti-GP antibodies were found to be related to the activity of the disease, suggesting a significant role in the pathogenesis of AITP. The autoantibodies produced against platelet glycoproteins are able to bind to platelet membranes, initiating pathways that result in dysfunction and destruction of platelets, which may result in petechiae, ecchymosis, and bleeding in some patients.

KNOWN CROSS-REACTIONS:
Leukocyte integrin Mac-1, HIV

References: