Possible presence of enhancing antibodies in idiopathic thrombo-cytopenic prupura

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摘要

Abstract

It is difficult to detect IgG anti-platelet autoantibodies in idiopathic thrombocytopenic purpura (ITP). Recently, it was reported that reactivity with glycoprotein IIb/IIIa was lost when IgG anti-GPIIb/IIIa antibodies from seven ITP patients were digested with pepsin to yield F(ab')2 fragments. These findings suggested that some IgG antiplatelet autoantibodies in ITP may be of low affinity and thus require the presence of 'enhancing' anti-IgG antibodies (i.e. rheumatoid factors, RFs) for detection. To test this hypothesis, we used a phage display technique to isolate five IgG RFs from an ITP patient (patient 1). Sequence analysis revealed that these RFs consisted of two clones, represented by GG3 and GG48. Both representative RFs bound specifically to IgG Fc fragments with apparent dissociation constants of 8.2 x 10(-8) M and 8.8 x 10(-7) M, respectively. Moreover, IgG RFs were subsequently found in a serum sample from patient 1. Combined, these results suggest that IgG RFs may occur in ITP, and may be required for the detection of some IgG anti-platelet autoantibodies and for the corresponding antibody-mediated platelet destruction in autoimmune ITP.