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Thrombocytopenia in HIV-Infected Hemophiliacs

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A clinical syndrome of 'thrombocytopenic pur-pura' has become recognized as a manifestation of HIV infection [8]; however, the mechanism of platelet destruction is still controversial. Several reports show evidence of platelet autoantibodies in drug addicts [6], whereas the nonspecific influence of immunocomplexes has been demonstrated in homosexuals [7]. Only few reports are available on the occurrence of thrombocytopenia in hemophiliacs with HIV infection [1, 3, 4]. The diagnosis of immune thrombocytopenia in these cases has been based on an increased number of megakaryocytes, short platelet life-span and a high level of platelet-associated IgG (PAIgG). However, liver damage and secondary spleen enlargement are common features in hemophiliacs who are exposed to viral infections. Furthermore, secondary hypergammaglobulinemia [3] and immunocomplexes [4] may also account for thrombocytopenia besides an autoimmune mechanism. Immunocomplexes are detected in a large percentage of patients with AIDS or ARC who also present the rheumatoid factor, antinuclear and anti-cardiolipin antibodies [9].

We have investigated the serum-bindable platelet IgG (SPBIgG), platelet-associated IgG (PAIgG), circulating immunocomplexes (CIC) and serum IgG in 16 patients with severe hemophilia (15 hemophilia A, 1 hemophilia B) and mild thrombocytopenia (below $200 \times 10^9/l$). All patients had been infected by hepatitis B and 8 patients had HIV seropositivity (Western-blot). The staging of HIV infection was carried out according to the Walter-Reed classification [5]: 2 patients were in stage 1, 2 in stage 2, 2 in stage 3, 1 in stage 4 and 1 in stage 6 (full-blown AIDS). SPBIgG and PAIgG were performed by ELISA [2] and CIC as C1Q consumption. The results are summarized as follows:

HIV+ HIV- Normal values

(8 cases) (8 cases)

Platelet count, $\times 10^9/l$ 143 ± 31 148 ± 30 > 200

SPBIgG all positives* 1 out of

8 positive negatives

PAIgG, fg/platelet 0.8 ± 0.6 1.8 ± 1.4 < 3 fg/platelet

CIC, $\mu g/ml$ $5.7 \pm 4.4^*$ 2 ± 0.9 < 2

Serum IgG, g/l $134 \pm 16^*$ 18 ± 5 < 15

Values are means $\pm$ SD.

* Statistical significance ($p < 0.05$) between HIV+ and HIV-hemophiliacs.

There is no evidence of HIV-related immune thrombocytopenia in our patients. Homosexuals with HIV-related immune thrombocytopenia had platelet-bindable immunocomplexes, high level of PAIgG and severe thrombocytopenia [7, 8]. Our HIV+ hemophiliacs had mild thrombocytopenia but the platelet count was not statistically different from HIV- ones. Nevertheless, HIV+ subjects had the presence of CIC, high serum IgG and SPBIgG with normal amounts of PAIgG. In conclusion, our study confirms the appearance of CIC in HIV+ hemophiliacs. Its role in the occurrence of severe thrombocytopenia should be evaluated in a long-term follow-up.

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