

## **Serum IL-2 and platelet-associated immunoglobulins are good prognostic markers in immune thrombocytopenic purpura**

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Immune thrombocytopenic purpura (ITP) is an acquired disease in which autoantibodies to platelets cause their sequestration and destruction by mononuclear macrophages, principally in the spleen. While most children with the disease experience a relatively short and benign clinical course, ITP in adults often lasts more than 6 months (chronic ITP) and is resistant to conventional treatment (corticosteroids, intravenous immunoglobulin, or splenectomy). This work was done to study the immunological difference between acute and chronic ITP, the effect of treatment on the studied immunological parameters, and to evaluate the role of prednisone therapy in chronic ITP. The study included 49 patients, twenty-three children with acute ITP, and twenty-six with chronic ITP. After taking the history, clinical examination was performed for all patients and control subjects. Laboratory investigations included complete blood count, bone marrow aspirate examination (patients), direct and indirect Coombs' test, antinuclear antibodies, lymphocyte phenotyping, cytokine (IL-2, IFN-gamma, and IL-6) measurement, and platelet antibodies by immunofluorescence. Results showed that acute ITP is more prevalent in preschool children and its relapse is lower when steroids are used for treatment. Platelet counts were significantly elevated in both acute and chronic ITP, especially with good response to steroids. Also, CD4 and CD4/CD8 were significantly reduced in chronic ITP with good response to therapy. Both IL-2 and IFN-gamma were significantly increased in chronic ITP when compared to acute ITP or control. Platelet associated IgM was detected more in acute than in chronic ITP, while IgG was equally detectable in both cases. This work shows that IL-2 is a good prognostic factor in chronic ITP and steroids are important for its treatment. It also shows that platelet associated IgG is a good monitoring parameter for response to treatment.