

Idiopathic Thrombocytopenic Purpura

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Idiopathic thrombocytopenic purpura (ITP) is a bleeding disorder of all ages. The majority of affected children have the acute form and approximately 20% of children and the majority of adults have chronic ITP which lasts 6 months or longer.

Since children of different ages may have different clinical courses, better delineation of the natural history of ITP in each age group is needed. For this purpose, prospective data obtained from the Intercontinental Childhood ITP Study Group were analyzed to determine the clinical characteristics, complications and management decisions for three specific groups of children with ITP: infants, children 1 to 10 years of age and children and adolescents 10 to 16 years of age. The mean platelet count at diagnosis was similar in all three groups, as was the percentage of patients with initial platelet count. The male/female ratio was highest in infants and decreased with age. Immunoglobulin therapy was used more often in infants and corticosteroids in patients with over 10 years of age. Chronic ITP was seen less frequently in infants than in children over 10 years of age. Intracranial hemorrhage occurred in 3 of 1,742 children during the first 6 months after the diagnosis of ITP.

ITP is known as an immune disorder caused by platelet-reactive autoantibodies. Antibody-coated platelets are cleared more rapidly from the circulation, often in the spleen, than they can be replaced by compensatory stimulation of platelet production in the bone marrow. Therapy with corticosteroids, danazol, intravenous immune globulin, anti-D antibody, and several other agents inhibits clearance of the antibody-coated platelets but is rarely curative. Most patients will sustain a hemostatic response after splenectomy, although relapses may occur at any time. Immunosuppressive treatment that inhibits T and B cell function including

azathioprine, cyclophosphamide, cyclosporin, mycophenolate mofetil had been tried without any definite benefits. Treatments to eradicate the *Helicobacter pylori* was tried to treat chronic ITP but there is no consensus for this kind of treatment.

There had been some reports about the use of rituximab (anti-CD20 monoclonal antibody) in pediatric patients with multisystem autoimmune diseases and as there had been some benefits of treatment with rituximab there is increasing clinical trials of rituximab in the treatment of childhood chronic ITP.

Macrolides have immuno-modulatory effects as well as anti-bacterial effects. There had been a report of clarithromycin use in 3 cases of chronic ITP with good responses. Cepharanthin is also known to improve the clinical courses of chronic ITP. Most of the treatment modalities for chronic ITP showed the response at the range of 10 to 30% except splenectomy which showed around 70 to 80%. But as we could not expect who is going to show response and who will not, we could not decide decisively for splenectomy as there is a definite risk of complications such as fulminant infection after splenectomy even though the patient received all vaccinations.

We performed a clinical trial with high dose cepharanthin in eleven patients with chronic ITP. Seven boys and four girls with a median age of 10 were enrolled. Two to four weeks after the initiation of this therapy, 4 patients showed complete remission and one patient showed partial remission and 6 patients showed no response. Side effects of Cepharanthin were not observed in all patients. For the development of new treatment modalities for chronic ITP, there is a need to make a large clinical group for the multi-center clinical trials to do a clinical trials of new drugs in short period of time.