

Chronic Childhood ITP: High Dose Parenteral Dexamethasone Therapy

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Chronic immune thrombocytopenic purpura (ITP) means at least 6-month duration of ITP^[1]. An autoimmune process leads to production of anti platelet membrane antibodies that destruct the platelets. Although in most cases no significant hemorrhage occurs, but bleeding in brain is possible. Also, thrombocytopenia limits the natural activity of children.

So, it is justified to find ways to treat these patients more safely. In a study high dose dexamethasone was administrated cyclically. The results were good and it was recommended to be applied to patients with symptomatic chronic ITP^[2]. In another in patients with chronic ITP who did not respond to IVIG, Danazol and Rhogam, high dose oral dexamethasone was effective^[3].

This study was performed on 10 cases of chronic ITP aged 2 to 14 years old who were admitted in pediatric ward, Dr. Sheikh Hospital, Mashad/Iran, during the years 2002 and 2003. The patients consisted of six females and 4 males (age below 18 years). They had chronic ITP and they had no response to previous treatments including IVIG, oral glucocorticoides, Rhogam administration and/or splenectomy.

Patients received intravenous dexamethasone 40 mg/m²/day in divided doses, for 4 days a week, then every 4 weeks for 4 cycles. This study was confirmed by the Research center and Ethics Committee of the University of Mashad.

Among 10 patients there were 4 males and 6 females with a mean age of 7.1±3.8 years (2 to 14 years). The most common symptom was epistaxis that was seen in 80% of cases. Before starting the protocol, platelet count was below 30.000 mm³ (mean platelet count was 29300 ranging 4000-66000). After treatment, platelet count rose above 30.000 mm³ (mean platelet count 31.500 ranging 8.000-58.000) (SD: 22437 vs 19193) P-value: 0.87 Wilcoxon Rank test). Patients were symptom free at least 4 months after completing the therapy.

Due to production of anti membranous anti platelet antibodies, chronic ITP results in 1 to 20% of ITP patients^[1,4,5]. It is not clearly known what the predictable risk factors are, but it seems that some circumstances are predisposing to chronicity such as onset of the disorder after 10 years of age, insidious symptoms before diagnosing the disease, more platelet count at onset of symptoms and female gender.

Occasionally, after months to a few years, spontaneous recovery occurs^[1]. In comparison with no therapy, it is detected that starting treatment with IVIG or glucocorticoides is associated with some recovery^[6-7]. Although splenectomy remains among the most effective measures in treating the chronic ITP^[8], because of its serious complications other therapies should be tried.

In one study in which 11 cases received high dose dexamethasone in divided doses for 4 days and every 28 days for 2-4 cycles, complete or partial response in some cases revealed^[9]. Also in another study on 20 children who received high dose dexamethasone, 5 cases had complete or partial remission^[2].

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In other reports, 5 males and 7 females treated with high dose oral dexamethasone, at least half of cases went to complete or partial remission for a long time^[3] and pulsed high dose therapy of dexamethasone with low side effects was reported^[10].

In our study we tried high dose dexamethasone for a few days and repeated at regular intervals. Prescription of drug was fairly successful; rise of platelet count above 30.000 mm³ was seen. It seems that it may be the result of glucocorticoides' regulation of immune system that acts via suppression of phagocytic action of reticuloendothelial system and auto antibodies production inhibition. Also, temporary lymphopenia can cause inhibition of more lymphocyte lysis through redistribution of lymphocytes to other lymphoid tissues. It can suppress preactivated T cells. And finally, it inhibits antibody binding on antigenic sites on platelets^[11,12,13]. Up to now, patients are being followed. They have received no other treatment. CBC is checked periodically.

Because of short course glucocorticoid therapy, long term complications such as osteoporosis, cataract, glaucoma, decreased linear growth, Cushingoid faces and obesity were not seen. No complication is observed. It seems that if chronicity occurs in a child with ITP, high dose dexamethasone administered parenterally can be helpful.

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