



**An American Perspective** reprinted from: **June 03**

Title: **Use of Steroids in Persons With ITP – A Boon and a Bane**

Authors: **James N. George, M.D.**, Oklahoma City, **George R. Buchanan, M.D.**, Dallas

A class of drugs called corticosteroids was developed in 1950 and has been used to treat patients with ITP ever since.

So what are these agents? They are similar to natural corticosteroid hormones. Hormones are chemicals that are made by the body, circulating in the blood, and having an effect elsewhere in the body. All corticosteroids have a similar chemical structure. They include estrogens (female hormones) and androgens (male hormones). However, the form of cortico-steroids most widely used in ITP are glucocorticoids, which are important in the body's metabolism, salt and water balance, and response to stress. During the past four decades physicians have found a use for glucocorticoid preparations (or steroids as we shall refer to them subsequently) in a variety of conditions, including kidney disease, cancer, skin problems, and autoimmune disorders.

So how do steroids benefit persons with ITP? Their major effect is a rise in platelet count (often within a few days) secondary to blockage or "paralysis" of the spleen, the major site of platelet destruction in ITP. After a few weeks of treatment steroids also decrease the amount of anti-platelet antibody made by the body's immune system. Steroids may also reduce bleeding even without raising the platelet count by means of strengthening or stabilizing the blood vessels.

The good news is that steroids often help patients with ITP. But, as many ITP patients know, the bad news is the many side effects of steroid therapy. Virtually all ITP patients taking steroids suffer from one or more adverse reactions. Most patients taking steroids have changes in their mood. This can include irritability, anxiety, and insomnia. Children often experience hyperactivity. Many patients also have vague aches and pains. Gastrointestinal side effects are also frequent, ranging from mild stomach irritation to bleeding ulcers (which fortunately are rare and perhaps can be prevented by use of antacid medication).

Even in the short term steroids may reduce the body's immunity, leading to thrush and a small risk of serious chickenpox and other viral infections. Steroids also lead to an increase in appetite, causing puffiness, weight gain and potentially an increase in blood pressure (due to the body's retention of salt and water). Unfortunately, some patients with ITP remain on steroids for prolonged periods of time (many weeks or months) and are therefore susceptible to delayed complications such as bone injury (osteoporosis or thinning of the bones and avascular necrosis, a serious complication involving damage to the hip bone), cataracts impairing vision, and diabetes mellitus (sugar diabetes). Also, children on long-term steroids may exhibit impaired growth. Many patients with ITP have learned that the side effects of steroids seem to outweigh the apparent benefits of raising the platelet count and reducing bleeding.

There are several kinds of steroids. The oral agents most commonly used in children and adults with ITP are prednisone, prednisolone, or methylprednisolone. Actually, these three medicines differ slightly but they are used by doctors interchangeably. The usual starting dose of prednisone for adults is usually between 40 and 100 mg daily. Sometimes when bleeding is severe methylprednisolone is given by vein. After a period of time the steroid dose is usually reduced and sometimes given on alternate days. The natural hormonal form of glucocorticoid, called cortisol, is made by the adrenal glands, small glands situated above each kidney. When a person takes prednisone daily, the adrenal gland is fooled into not making the natural hormone. This can be potentially

*continued overleaf*

dangerous when steroid medication is abruptly discontinued, because recovery of adrenal gland function to produce the body's own cortisol may require weeks to months. If a patient has been on steroid medication for longer than a few weeks, the dose must be decreased gradually, especially when the dose has dropped to 7.5 mg per day, to allow adrenal gland production of cortisol to recover. Cortisol production may be critical for survival at times of severe illness or injury. Therefore if a severe illness or injury occurs in a patient on a low dose of prednisone (such as 5 to 10 mg per day) or in a patient who has recently stopped taking steroid medication, high doses of steroid, comparable to the body's stress response are essential. Suppression of the adrenal gland and perhaps other side effects are somewhat less when prednisone is given as a single dose in the morning once every other day.

The other steroid sometimes used in patients with chronic ITP is dexamethasone, or decadron. The usual adult dose is 40 mg daily for 4 consecutive days, repeated once monthly. When steroid medications are given for brief times, such as 4 days, it is not necessary to gradually decrease the dose. One theoretical benefit of dexamethasone is that it stays in the body longer than prednisone. A few years ago this treatment was widely used, but with more experience it has been learned that it is not generally a successful treatment and it is now used much less frequently.

So what is the bottom line about use of steroids in ITP? For many ITP patients, steroids are quite beneficial, if used properly. A patient should take a steroid medication with the aim of reducing bleeding and being able to live a better life. The objective should not be normalizing the platelet count. Steroids should, ideally, be used sparingly and only in the short term – for a few weeks at most. Their continued use at any dose or schedule is often not appropriate for ITP. Unfortunately, many physicians (hematologists as well as general practitioners) who are not experts in ITP fail to use steroids properly. They often continue to prescribe large doses (trying to make the platelet count higher), even when reducing or discontinuing the medication would be more appropriate. If steroids are not effective, they should be discontinued so that other treatment options can be considered, including “watchful waiting” (since many patients with ITP aren't that troubled by their disease and need no drug therapy whatsoever), intravenous immunoglobulin, anti-D immunoglobulin (available in the United States and now recently in the U.K.), splenectomy, or newer experimental agents.

In conclusion, steroids can be a “friend” of many bleeding ITP patients by reducing hemorrhage. However, this friendship is nearly always temporary. It is important not to remain on high doses of prednisone for too long a time, for too much of a good thing can be bad, just like beer, ice cream, television, and many things in our lives!

---

**N.B.** Steroid users should carry a blue card issued by the hospital that is updated each time the dosage is changed.