

Abstract for the AACFS Conference in Wisconsin, USA, October 2004

High dosage B12 therapy in CFS using tablets.

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Objectives

Many treatments have been tried in CFS, but none are curative on their own. (Englebienne et al) Therapists use multiple strategies, ranging from adapted nutrition, graded exercise, cognitive behavioural therapy to multiple drug regimens. Several renowned CFS specialists nowadays use high dosage vitamin B12 somewhere in their approach of the disease (Pall, Lapp, Cheney, De Meirleir). Some of them claim to have treated thousands of patients with high dosage vitamin B12. (Lapp/Cheney) Research into the role of vitamin B12 in CFS showed (functional or absolute) shortage of vitamin B12 in the central nervous system in CFS patients. (Evengard, Regland, Lindenbaum) Theories on the supposed working principle of vitamin B12 in CFS range from stimulation of recovery by lowering homocysteine concentrations on the one hand (homocysteine (Herrmann) being toxic for vessels and nervous tissue) to binding free radicals on the other hand or, finally, by a simple process of detoxification as B12 is rapidly excreted by the urine and is known to be capable of binding heavy metals like cyanide. (Beasley; Pall; Sauer) Theories on the supposed working principle of vitamin B12 in CFS range from stimulation of recovery by lowering the vascular and neurotoxic homocysteine and providing mono carbon groups for cell growth to binding free oxygen radicals to simply detoxification because the B12 is rapidly excreted by the urine. (Williams et al)

Methods

One of the major drawbacks in using high dosage B12 is the fact that in such high concentrations it is only available as a drug for injection. Many patients are reluctant to accept injections and many rural situations are less suitable for administering injections which are always accompanied by some pain and possibly by other complications like subcutaneous or intramuscular bleeding. Nasal sprays are available but very expensive. That is the reason we developed a high dosage (10 mg) hydroxobalamin tablet. In the literature the estimation of the magnitude of absorption is 1-30%. (Post) Especially the hydroxocobalamin form of B12 has a good absorption. (www.b12.nl) As far back as 1951 it was already shown that B12 has several gastro intestinal absorption mechanisms, of which some can be saturated, whilst others seem to have no upper limit of absorption. Even in the case of absorption problems of vitamin B12 e.g. lack of intrinsic factor, adequate absorption can be achieved by increasing the oral dose. (Bruins Slot et al) This was also recently confirmed by several researchers. (Kuzminsky et al; Sharabi et al).

Results

We treated about 50 patients with severe fatigue after successful (curative) treatment for Cancer, Marfan's syndrome, Fibromyalgia, Gilbert's syndrome, Burnout, CF and CFS with low-normal to normal B12 blood levels with 10.000 micrograms of vitamin B12 once a day in a sublingual form. We prefer hydroxocobalamin in this high dosage regimen for several reasons. It seems safer, (Zerbe) has better absorption and theoretically covers more working mechanisms than the cyanocobalamin form of vitamin B12 although it is more expensive. The blood levels of patients rise two to three times the normal values in about 2 weeks and in most cases stayed raised for several weeks after cessation of the therapy.

Side effects of the high dosage oral B12 were not seen, except a slight increased incidence of acne which in most cases could be treated easily by the local application of honey.

Conclusion: Oral high dosage vitamin B12 tablets in the hydroxocobalamin form seem a good and safe alternative for injections that are used in the treatment of several diseases that are accompanied by severe fatigue. Further research needs to be done to investigate the role of vitamin B12 in fatigue, performance and recovery.

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