

Depression and Vitamin B12 Deficiency in Multiple Autoimmune Syndrome (MAS) Type 3: About A Case

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Abstract

Case Report

Vitamin B12 deficiency significantly increases the risk of depressive symptoms. We report the case of a 47-year-old woman with vitamin B12 deficiency in the setting of multiple autoimmune syndrome (MAS) type 3 to draw attention to the importance of the dosage of vitamin B12 in the event of depression.

Keywords: Depression, vitamin B12, deficiency.

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INTRODUCTION

Vitamin B12 deficiency is an often overlooked cause of psychiatric morbidity and the damage could become permanent if not treated in time, while clinicians are aware of the associated neurological symptoms.

CLINICAL CASE

This is a 47-year-old patient, followed for vitiligo for 20 years and a depressive syndrome resistant to several classes of antidepressants for 3 years. She was admitted to the neurology department for an ataxic walk evolving for a month, with on the neurological examination, a syndrome of combined sclerosis of the spinal cord associated with a static cerebellar syndrome, the psychiatric examination found a patient slowed down on the psychomotor level, irritable and anxious with a sad mood and ideas of pessimism and incurability.

The biological assessment showed macrocytic anaemia (Hb: 89 g/l, MCV: 117 fl), vitamin B12 deficiency and high TSHus (7 mIU/l). The immunological review was positive with high levels of an anti-intrinsic factor, anti-parietal cell, anti-thyroglobulin, anti-thyropoxidase and antinuclear antibodies.

The myelogram revealed medullary megaloblastosis. Gastro-duodeno-jejunal fibroscopy with biopsies revealed fundic atrophy with no sign of malignant degeneration.

An endocrinology opinion was requested objectifying mild hypothyroidism which did not require hormonal supplementation.

Given these data, our patient has put on vitamin B12 (Hydroxocobalamin) supplementation at a dosage of 5000 gamma/day intramuscularly for seven days, then 5000 gamma/week for a month and finally 5000 gamma/month.

The evolution was very favourable under treatment with a marked improvement in walking, a correction of haematological disorders and a spectacular regression of neuropsychiatric symptoms after 6 months.

DISCUSSION

In our patient, the diagnosis of SAM type 3 was retained given the association of vitiligo, neuroanaemic syndrome and Hashimoto's thyroiditis.

The neuropsychiatric manifestations of Biermer's disease are well known, initially thought to be

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related to anaemia hence the name "neuro-anaemic syndrome". They can be isolated and reveal Biermer's disease.

The psychiatric symptoms frequently found are depression, manic state, psychoses and obsessive-compulsive disorders (Durand *et al.*, 2003), dementia and also catatonia in cases of extreme vitamin B12 deficiency.

The classic neurological picture of Biermer's disease is that of combined degeneration of the marrow including posterior cord involvement and a pyramidal deficiency syndrome.

A study, published in the American Journal of Clinical Nutrition, confirms that a high intake of vitamins B6 and B12 is associated with a reduced risk of depression in the elderly.

Previous studies had already linked B vitamin deficiencies to depression.

The treatment of neurological involvement in the context of vitamin B12 deficiency does not differ from the treatment of forms without neurological involvement. Neurological recovery seems essentially related to the earliness of the supplementation treatment. The doses of vitamin B12 to be administered are not consensual.

CONCLUSION

As psychiatric manifestations can be the inaugural signs of the disease, screening for this deficiency should attract the attention of practitioners, particularly in the case of an atypical psychiatric clinical picture.

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