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LETTERS TO THE EDITOR
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CLINICAL NEUROPATHY AND METFORMIN USE. TIME TO MONITOR VITAMIN B12?

NEUROPATÍA CLÍNICA Y USO DE METFORMINA. ¿HORA DE MONITORIZAR LA VITAMINA B12?

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LETTERS TO THE EDITOR

Mr. Editor

The low serum concentration of vitamin B12 is a common situation in people with type 2 diabetes treated with Metformin, since daily consumption of 3 or more tablets, for more than 6 months, is significantly associated with deficient plasma levels of vitamin B12 , <221 pmol / L, this association is independent of sex, age, alcohol consumption and use of H2 antagonists / Selective proton pump blockers[1].

Metformin is the first therapeutic option for the treatment of type 2 diabetes mellitus (T2DM), as recommended by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). On the other hand, metformin has beneficial effects on carbohydrate metabolism, weight loss and vascular protection. However, it is reported that metformin may decrease the uptake of cobalamin (vitamin B12) in the terminal ileum, because it competitively blocks the binding of the intrinsic factor-vitamin B12 complex to its receptor, a union that is calcium-dependent[2-3] .

Several studies suggest a possible association between vitamin B12 deficiency and clinical neuropathy in patients with type 2 diabetes under treatment with metformin[1-2-4-5]. Although several authors obtained similar results, others showed opposite results[6].

According to the1999-2006 NHANES study in the US, data analysis was performed in adults ≥50 years of age with type 2 diabetes (n = 1,621) or without type 2 diabetes (n = 6,867) of the NATIONAL SURVEY OF HEALTH AND NUTRITION EXAM (NHANES). Reinstatler et al. Found that in diabetic subjects taking metformin 22.0% had plasma levels of vitamin B12 ≤ 221 pmol / L versus 7.7% in those who did not take metformin. Among people with diabetes, the use of metformin was associated with vitamin B 12 deficiency (OR: 2.92; CI: 95% 1.26–6.78), similar to those found in various reviews[4].

Few studies have explored the burden of neuropathy that could be imposed on patients with metformin treatment. A recent study revealed significantly higher neuropathy scores in the group that took metformin and a positive correlation (r = 0.53) between neuropathy and the cumulative dose of metformin[4].

Finally, as long as the dilemma is fully clarified, in daily medical practice we should incorporate the monitoring of B12 levels as an essential part in the evaluation, follow-up and clinical response of diabetic patients receiving metformin.

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