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Vitamin B₁₂ Status und Akzeptanz
der oralen vs. intramuskulären Substitutionstherapie
in einem ambulanten Patientenkollektiv

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16. Januar – 8. Juni 2012

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Abstract

Background

Vitamin B₁₂ is essential for the hematopoiesis, the function of the nervous system and a well-performing proliferation. A deficiency can have serious and particularly irreversible consequences. The causes for the development of a vitamin B₁₂ deficiency are heterogeneous and include malabsorption, autoimmune disease and insufficient intake. The therapy consists of vitamin B₁₂ substitution, independently of the cause. The substitution can be applied by intramuscular injections, high-dose tablets or intranasal formulations.

Risk factors for the development of a vitamin B₁₂ deficiency and the acceptance of the oral route of administration should be assessed in this master thesis.

Methods

The study participants were recruited in general practitioner practices. The including criteria comprised the indication of a vitamin B₁₂ analysis. Patients who did not attain full age and residents of a care home were excluded. The patients were informed and afterwards interviewed by telephone. The used questionnaire contained two different parts. In a first part question about risk factors like malnutrition, vegetarian or vegan nutrition, intake of antacids, oral antidiabetic drugs or oral contraceptives, and the nicotine and alcohol consumer behavior were asked. In the second part the acceptance for intramuscular or oral vitamin B₁₂ substitution was evaluated by using a scenario based, structured interview schedule.

Results

67 patients completed the study. Patients taking oral contraceptives tended towards lower vitamin B₁₂ values than the other patients. Apart from that no association between investigated risk factors and vitamin B₁₂ status could be found.

61.2 % of the patients would prefer the oral, 34.3 % the intramuscular treatment. The main reasons to choose the oral substitution were superior comfort of the tablet application and the lower time expenditure. The intramuscular treatment was chosen because of the supposed superiority of clinical effects and insufficient compliance with the oral therapy. In case of prolonged or life-long substitution requirement 46.3 % would prefer the oral and 50.7 % the intramuscular treatment. Patients with frequent consultations with their general practitioners tended to prefer the intramuscular treatment. Patients who previously experienced intramuscular vitamin B₁₂ injections had chosen the intramuscular treatment as frequent as the oral therapy.

Discussion

Due to the low prevalence of the assessed risk factors, the analysis was underpowered. No concrete statements could be made on this part. The majority of the study population would choose the oral substitution. The evaluation of the main reasons showed that the oral