

## A Serious Case of Vitamin B12 Deficiency

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### 1. Clinical Image

This Report Illustrates the Catastrophic Damage to the Sensory System if the Diagnosis of Vitamin B12 Deficiency is not done on Time to Reverse the Symptoms and Signs of Such Clinical Case.

The Patient (Vdr), a Male of 70-Year-Old Started with Lack of Control by the Hands of Relatively Light Objects without Pain or other Signs of Damage to the Upper Extremities or Symptoms in the Lower Ones.

He First Consulted A General Practitioner who Order an Electromyogram of the Hands With Negative Signs of Compromise of the Motor Nerves. These Negative Results Led the Doctor without a Real Cue of what the Patient was having. The Patient, A Doctor as well, Decided to Consult a Neurologist Given that he started dropping the Silver at Dinner. The Meeting with the Expert and Discussion To Follow Led To Test for Vitamin B12 in the Blood. The Results were Clear-Cut of Deficiency Since the Values were Close to Zero. Normal Value Range Between 200 To 900 Ng/ML. He Ordered a MRI of the Cervical Spinal Cord that Revealed a Great Compromise of the Sensory Nerves (Figure 1) That Certainly Explained the Lack of Sensory Control by the Patient without any Major Symptoms. He obviously recommended to have Vitamin B12 by Injection Twice a Month and Control after Three Months. The Patient Searched the Literature and Found that High Doses of the Vitamin via Sublingual Could be as effective as the Injections. So, He Started the Treatment with 1000 Ug Daily and Continue Until the Next MRI As Shown in Figure 2 That Revealed a Dramatic Reverse of the Original Lesions Plus the Patient Recovered Complete Control of his Hands.



**Figure 1:** Upper Figure Indicates the Damage of the Cervical Spinal Cord (Notice the White Band as Shown by the Arrow in Figure 1.



**Figure 2:** Post-Treatment Shows a Homogenous Picture of the Cervical Spinal Cord.

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The Cause of this Extreme Deficiency of VitB<sub>12</sub> was due to Absence of Absorption of the Ingested Vitamin in the Food due to A Lack of a Transporter that Carries the Vitamin to the Intestine where is taken up by A Specific Receptor that Recognize the Transporter and Delivered to the Blood and then Stored in the Liver.

The half Live of the Vit-B<sub>12</sub> is about 6 Days but the Stored in the Liver (400 Days) is enough to compensate the Lack of Absorption for A Long time which was the Case of the Patient until Serious Sensory Problems Occurred. Another Element to consider in Future Cases is that usually the Symptoms Begin in the Lower Extremities Causing Difficulties in Walking and Not Like in this Case.

As Conclusion is Important that the Medical Community, Particularly the General Practitioners Should be Alerted of Such Deficiency Especially in Elder Patients and those with Gastric Issues. The Blood Test is Easy and Cheaper Avoiding Later Serious Clinical Problems with Major Complications.