The Difficulties in Diagnosis of Magnesium Deficiency by Practitioners from the View of Patients

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Magnesium-deficiency tetany – the overlooked disease

The problem

Both the magnesium-deficiency syndrome[1] as well as the magnesium-deficiency tetany[2] are well described in the literature.[3] However, the implementation of this knowledge in the textbooks for students and practitioners[4] is inadequate. In general, one cannot find sufficient hints to
– the necessary diagnosis by the clinical picture (at least in the german literature),
– the frequency and clinical importance of the disease, and finally
– the genetic predisposition as well as heredity.
With few exceptions, the experience of our organisation is that magnesium deficiency finds only inadequate attention in the practical medicine.

The reason

The reason is the discrepancy between
– the official recommendations about magnesium[5] and
– the actual international knowledge
that is reported by experts.
In Germany, magnesium is even classified as controversial drug.[6] This fatal statement is founded on contradictory results on various questions (myocardial infarction, migraine, headache, diabetes, etc.) This leads to the reproach that many indications exist only in the fantasy of the producers of pharmaceuticals.[7]

The drama

Most of the patients with magnesium deficiency experience an odyssey of many years in being sent from one specialist to the other before the cause of their troubles is found.[8] These patients are always in danger of being classified as hypochondriacs, hysterics, and neurotics. Too often they are treated correspondingly (for instance with cold water gushes).
An example: The hyperventilation tetany is better known to the practitioner than the fact that metabolic magnesium deficiency is a wide-spread cause of this tetany.[9] For this reason, patients with hyperventilation tetany are treated more often psychologically and with neuropharmaceuticals than with the causal treatment, i.e., magnesium.
In addition, the classification as neurotic is a deadlock trap for all further treatment. But this is not the only problem. Even well diagnosed magnesium-deficiency patients treated with magnesium run the risk that, in case of a necessary hospitalisation, magnesium treatment is stopped because the serum value of magnesium is in the far too wide reference region.[8]

The solution

1. The misinterpretation of apparently normal serum values of magnesium in the clinical practice must be abandoned.
2. In contrast to the prevalent symptomatic therapy, the causal treatment of all diagnosed or genetic-risk magnesium-deficiency patients must become obligatory.
3. The importance of genetic predisposition and the existence of genetic polymorphism must be acknowledged, as well as the necessity to determine the frequency of this polymorphism.

Comments

1. Genetic polymorphism must be taken into account. Known genetic causes are the reduced absorption ability in the intestine, as well as the reduced resorption ability in the kidneys.[10]
2. Diagnosed magnesium-deficiency patients and their families constitute the starting point to develop a corresponding genetic test of the predisposition to magnesium deficiency.
3. Although the serum value of magnesium can be determined easily, it is rarely done by practitioners. In addition, the reference region is far to wide. Even severe magnesium deficiency is found by this in the extreme cases only. *The lower limit of reference serum value must be fixed at 0.8 mmol/l. Even then, normal values do not exclude magnesium deficiency.*[2]
4. The individual demand reaches from 300 mg to 1200 mg Magnesium per diem. It is necessary to adapt the daily replacement for each undiagnosed patient individually.[11] Tetany patients in our self-help group need 900 - 1200 mg per diem. Any reduction leads to deficiency symptoms in 6 to 48 hours.
5. Magnesium is an essential mineral. If magnesium deficiency is found through symptoms or therapeutic success, it must be prescribed. *Exclusively symptomatic treatment is medical malpractice.*
6. The recommendations of the scientific magnesium societies[12] must be implemented in therapy directives and in the textbooks on differential diagnosis: *Magnesium deficiency has to be checked in all cases of stress, diabetes, hypertension, infarction, arrhythmia, ischemia, depression, epilepsy, seizures, crampi, M.Parkinson, anxiety, agoraphobia, migraine, headache, tinnitus, dizziness, tremor, tetany, asthma, eclampsia, dysmenorrhoe.*
Fehlinger[13] at last: It is one of the hardly explicable phenomena in medical history that comparatively simple realisations and progress of often considerable use for the patients are only very slowly propagated and introduced in the everyday routine.

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[7] "Efficacy of magnesium treatment seems to be not validated in the case of chronic tetany syndrome", Arzneimitteltelegramm (1997): Positivtelegramm. Berlin, S.126.
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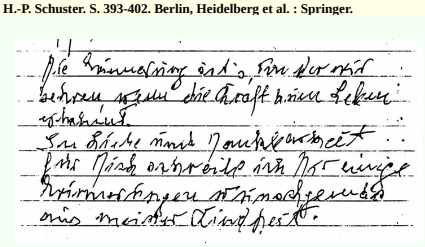

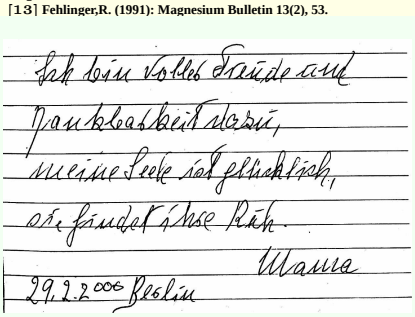

An example

On the left, the writing of a patient (1996) diagnosed as Morbus Parkinson in 1990.
The patient began high-dosed substitution of magnesium (1200 mg per diem) in 1998. On the right, the writing of the same patient after 2 years treatment (2000).