SHOULD ANY TREATMENT DECISIONS BE MADE BASED ON MRI SUCH AS CHANGES FROM INTERFERON TO OTHER DMD, EVEN IF THERE IS NO CLINICAL EVIDENCE OF DISEASE ACTIVITY

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The importance of MRI in the diagnosis of MS demanded changes of MRI criteria in purpose of earlier diagnosis of MS (1, 2, 3). Similarly, in MS patient treated with disease modifying drugs (DMD) critical signs of treatment failure were demanded.
The International Working Group for Treatment Optimization in MS suggested an „analogue" model-based on changes in three parameters: relapses, progression and MRI. Changes in mentioned parameters were classified as notable, worrisome or actionable (4, 5).
In MS patients treated with DMD, MRI changes characterized with new T2 lesions or with enhancing activity are important signs of possible treatment failure. Considering MRI changes compared to a prior scan, five indicators are considered:
1) New gadolinium enhancing lesions
2) new hyperintense T2 lésions,
3) enlarging T 2 lesions,
4) new T1 hypointense lesion,
5) enlarging T1 hypointense lesions.
A change in one of these categories is considered notable, change in two or three categories worrisome and in 4 or 5 categories actionable.
How can MRI progression are explained if there is no clinical sign of disease progression in patients treated with DMD and what does it mean for patient? It can be explained with subclinical course of MS, and it is present in various stages of the disease. It could be seen already at the first clinical presentation of MS but also in patients treated with disease modifying drugs (DMD). Therefore changes only in MRI may be enough important for switching from one immunomodulatory agent to another. Some experts' panels proposed criteria for treatment failure based on relapses MRI criteria and functional status
For „treatment failure"various criteria maybe be selected (5, 6). However, irrespective of the selective criteria, there is no adequate scientific data available to support a particular course of action (7).
Another problem is treatment start in patients with radiologically isolated syndrome (RIS) .The problem is in the fact that although MRI provide important evidence for dissemination of the demyelinating lesions in space (DIS) and in time (DIT) the central feature of diagnostic criteria for MS remains clinical presentation (8). It was shown that in such patients with MRI changes highly suggestive of demyelinating disease, very frequent develop clinical manifestation of disease. The discussion on DMA treatment for reducing the risk of MS has been suggested (9).
Some cases characterized only with MRI changes without clinical signs of disease activity during DMD treatment in relapsing remitting course of disease, or cases with brain and/or spinal cord changes in MRI highly suggestive on MS but without clinical signs of disease will be presented and discussed regarding the necessity to switch the therapy or in RIS to start the treatment.

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