

REVERSIBLE METHOTREXATE-INDUCED LEUKENCEPHALOPATHY CAUSED BY PROLONGED ORAL IMMUNOSUPPRESSIVE THERAPY IN MS

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We present a case report that may further elicit the differential diagnostic spectrum of causes for sub-acute clinical worsening in MS-patients with long-term treatment by oral methotrexate. A 56-yr old woman was referred to our MS-center for further treatment after a period of increasing gait problems for 6 months; she was diagnosed 5 years previously with PPMS and received oral methotrexate for 28 months.

After the referral the patient presented further sub-acute marked clinical worsening under continued MTX-therapy. The cranial MRI showed symmetrical diffuse leukencephalopathic changes in the posterior periventricular area, markedly distinct from the disseminated demyelinating lesions.

Presuming the morphological changes observed in the cranial MRI might be due to MTX neurotoxicity and white matter damage as described in cancer patients with MTX administered intrathecally and intravenously, we discontinued any therapy with immunosuppressive effects on this patient. Further observation showed good clinical recovery; within 3 following years we find continuing regression of the diffuse MRI-changes, mirrored by clinical improvement.

In this report we show the development of distinct periventricular white matter changes preferentially localized in the posterior areas associated with oral MTX administration in a nonmalignant disease.