

Breakdown of the blood-brain barrier precedes symptoms and other MRI signs of new lesions in multiple sclerosis: pathogenetic and clinical implications.

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# BREAKDOWN OF THE BLOOD-BRAIN BARRIER PRECEDES SYMPTOMS AND OTHER MRI SIGNS OF NEW LESIONS IN MULTIPLE SCLEROSIS: PATHOGENETIC AND CLINICAL IMPLICATIONS

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*Brain*, Volume 113, Issue 5, 1 October 1990, Pages 1477–1489,  
<https://doi.org/10.1093/brain/113.5.1477>

**Published:** 01 October 1990    **Article history** ▼

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# Abstract

From an extensive serial magnetic resonance imaging (MRI) study in multiple sclerosis (MS) we have identified 4 cases in which disruption of the blood-brain barrier, as detected by gadolinium-DTPA enhancement, preceded other MRI abnormalities and in 1 case clinical evidence of the new lesion. This supports the view that a defect in the blood-brain barrier, and therefore inflammation, is an early and possibly crucial event in the pathogenesis of the new lesion in MS. These cases showed a marked discrepancy between MRI abnormality and symptoms. The mechanisms contributing to this disparity are discussed, and it is concluded that far from being surprising it is to be expected.

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