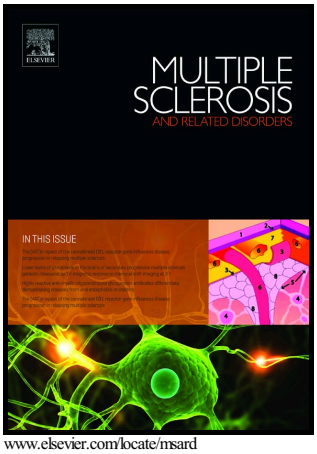

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Reduction of PK11195 uptake observed in Multiple Sclerosis Lesions after Natalizumab Initiation

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Abstract:

Objective:

The objective of this study is to longitudinally analyze the uptake of [^{11}C]PK11195-PET in multiple sclerosis patients after 3 and 6 months of natalizumab treatment.

Methods:

Eighteen MS patients, starting treatment with monocloncal anti-VLA-4, were enrolled in a longitudinal PK-PET study. PK uptake was quantified by volume of distribution (VT) calculation using image-derived input function at baseline, 3 and 6 months. Pharmacokinetic quantification was done using a segmented MRI, and selected areas included white matter, gadolinium enhancing lesions, non-enhancing lesions, cortical grey matter and thalamus. VTs of lesions were calculated in reference to each patient's white matter (VT ratio = VTr), to consider physiologic variability.

Results: