# Increased natural killer cell chemotaxis to CXCL12 in patients with multiple sclerosis

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Multiple sclerosis (MS) is an inflammatory and neurodegenerative disease characterized by leukocyte infiltration into the central nervous system (CNS). Migration of lymphocyte subpopulations towards CXCL12 was analyzed coupled to six-color flow cytometry in untreated patients in the remitting phase, during relapse, in patients with clinically isolated syndrome (CIS), and in healthy volunteers. Significantly higher migration rates of natural killer cells (CD45+CD3-CD16/56. +) were observed in patients in remission and CIS patients than in patients during relapse and in controls. Moreover, the frequency of CD3-CD16/56+CXCR4. + cells is higher in patients in remission and in CIS patients, but not during relapse. 

Chemotaxis

CXCL12

CXCR4

Multiple sclerosis

NK

CD16 antigen

CD3 antigen

CD45 antigen

CD56 antigen

chemokine receptor CXCR4

stromal cell derived factor 1

chemokine receptor CXCR4

CXCR4 protein, human

cytokine

stromal cell derived factor 1

adult

Article

cell infiltration

central nervous system

chemotaxis

controlled study

degenerative disease

demyelinating disease

female

flow cytometry

human

human cell

human tissue

inflammatory disease

leukocyte

lymphocyte migration

male

multiple sclerosis

natural killer cell

priority journal

relapse

remission

analysis of variance

drug effects

lymphocyte subpopulation

metabolism

middle aged

multiple sclerosis

natural killer cell

neutrophil chemotaxis

pathology

physiology

young adult

Adult

Analysis of Variance

Central Nervous System

Chemokine CXCL12

Chemotaxis, Leukocyte

Cytokines

Female

Flow Cytometry

Humans

Killer Cells, Natural

Lymphocyte Subsets

Male

Middle Aged

Multiple Sclerosis

Receptors, CXCR4

Young Adult