

Medical Update Memo

September 3, 2009

Smoking is associated with increased lesion volumes and brain atrophy in multiple sclerosis

Summary

In people with MS, cigarette smoking has been associated with a higher risk of clinical progression. The authors of this study aimed to investigate the effects of cigarette smoking on the MRI scans of people with MS. **Neurology. 2009 Aug 18;73(7):504-10**

Details

They found that people who smoked at the time of their MRI scan, or who had smoked in the past, had higher lesion volumes and greater brain volume loss than those people who never smoked. To explain these results, a number of hypotheses have been proposed by the authors, but the potential mechanisms are still unclear.

Cigarette smoking has been linked to higher susceptibility and increased risk of progressive multiple sclerosis (MS). The effects of smoking on MRI characteristics of patients with MS have not been evaluated. 368 consecutive patients were studied of whom 240 had never smoked and 128 were either current or former smokers. Among smokers, the average number of packs per day smoked was close to 1 and the mean duration of smoking was between 9 and 18 years.

Smoking was associated with worse Expanded Disability Status Scale (EDSS). There were adverse associations between smoking and an increased number of lesions. Smoking was also associated with decreased brain volume. Authors conclude that smoking is associated with increased blood-brain barrier disruption, higher lesion volumes, and greater atrophy in multiple sclerosis.

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