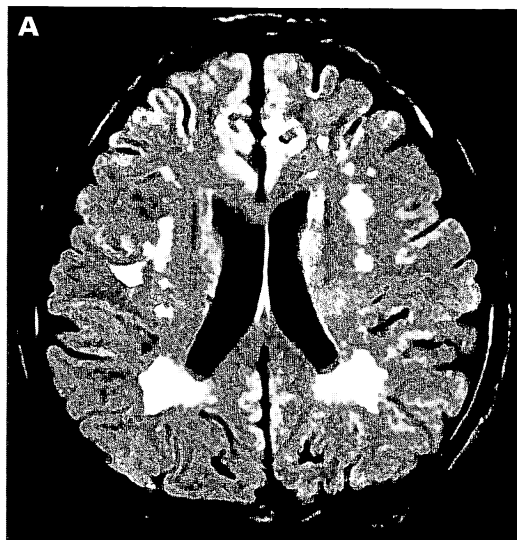


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NEUROLOGICAL PICTURE

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## Chronic misuse of paint thinners



A 17 year old man who had chronically misused paint thinners for 3 years was examined for occasional occipital headache after an abstinence of 4 months. He was neurologically normal without any cognitive or psychological impairment. Fluid attenuated inversion recovery images showed multiple high intensity lesions in the subcortical and deep white matter (figure, A, B).

The major constituent of thinner is toluene, which is a neurotoxic solvent. Brain MRI in chronic thinner or toluene misuse may show cerebral and cerebellar atrophy, atrophy of the corpus callosum, and loss of grey-white matter contrast. T2 weighted images show scattered high signal lesions in the white matter and brainstem due to demyelination or gliosis, and low intensity lesions in the basal ganglia, thalami, and subcortical white matter, which

are postulated to be caused by iron deposition or toluene accumulation into the cell membrane due to its lipophilicity.<sup>1-3</sup>

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