Demyelination in the Brain as a Paraneoplastic Disorder: Candidates Include Some Cases of Multiple Sclerosis

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We read with interest the epidemiology report of Sumelahti et al. [1] regarding the incidence of cancer in multiple sclerosis (MS) patients in Finland. The incidence of hematologic malignancies was clearly somewhat elevated in MS patients compared to the general population, and the incidence of central nervous system tumors was markedly elevated in MS patients. The high concurrence rate of certain types of malignancies with MS was unexpected and difficult to explain. In the case of hematologic malignancies the authors suggested a potential common infectious etiology, but then acknowledged several factors which argue against this possibility. In the case of brain tumors, which also had a strong temporal correlation with MS, the authors suggested a potential ‘misclassification’, but again acknowledged factors which argued against this.

We believe that the authors’ [1] data collection and results were substantially correct. Their results may correlate well with recent isolated case reports of demyelination in the brain as a paraneoplastic disorder [2–6]. These reports have described a preponderance of hematologic malignancies [2, 3] and brain tumors [4] together with brain demyelination in the form of MS [3] as well as with other manifestations of demyelination in the central nervous system such as acute disseminated encephalomyelitis [2], large tumor-like demyelinating lesions [5], optic neuritis [6], and Devic’s syndrome [6].

Recently a group of neuropathologists tabulated decades of pathologically confirmed reports of brain tumors concurring with MS [7]. They reported that women were affected much more frequently than men, and that the mean age at diagnosis was 48.5 years [7]. These findings [7] were consistent with those of Sumelahti et al. [1]. The report [7] attempted unsuccessfully to provide an explanation for this phenomenon, and it also failed to mention recent reports of demyelination in the brain as a paraneoplastic disorder.

We believe that the epidemiologic data provided by Sumelahti et al. [1] confirm the demographic pattern revealed by tabulated neuropathologic data [7] and support the recent clinical observations of demyelination in the brain as a paraneoplastic disorder.

References