Aggression and multiple sclerosis

SIR: Psychiatric symptoms, both cognitive and affective, have been reported frequently in multiple sclerosis (MS) (Grant, 1986). Euphoria and depression are the affective disorders most frequently encountered. No mention has been made of aggression. We present a young patient, who developed changes in personality, and aggressive behaviour, in conjunction with the acute onset of MS.

Case report. A previously healthy 17-year-old man was admitted to hospital with acute loss of vision of the right eye, speech and balance disturbance, and an almost complete quadraparesis. A diagnosis of laboratory-supported definite MS (Poser, 1983) was established. Magnetic resonance imaging (MRI), using a mildly T2-weighted spin echo technique, demonstrated extensive periventricular white matter hyperintensities. Lesions were also found in the globus pallidus, the mesencephalon, the cerebellum, and bilaterally in the medial part of the temporal lobes. Subsequent high dose intravenous methylprednisolone treatment was followed by marked improvement of all but the visual symptoms. Soon afterwards he was able to resume his work.

After discharge, two months later, his family, employer, and general practitioner noticed progressive behavioural changes with an aggressive character, although his premorbid personality had been pleasant and co-operative. His aggressive behaviour led to provocations and fighting, followed by police contact on three occasions. One year after the initial symptoms, imprisonment followed extortion of an 83-year-old man. During this period he had an attack of optic neuritis of the left eye. At the time of imprisonment there were bilateral visual, and discrete cerebellar and sensory, signs. Psychiatric examination only revealed cognitive disturbances, such as slight memory loss, perseverance, and judgemental disturbances. The patient complained about a loss of sexual interest and impotence. There were no signs of depression or euphoria. Personal history revealed repeated assaults by his first stepfather. During four months imprisonment he stabilised, and showed no further aggressive behaviour. A second MRI showed a change in the lesions aforementioned. In the temporal lobes the old lesions had faded, but new lesions had appeared on both sides.

According to McGuire & Troisi's (1989) definition, aggression is regarded as behaviour to cause physical injury to others, extended with verbal threats of physical violence. We report a previously healthy patient, with an acute and dramatic onset of MS associated with personality changes and aggressive behaviour. Aggression in this patient might have been caused by either psychogenic or organic factors, or both. Diminished cognitive control might have released emotions with aggressive connotations in relation to impotent anger caused by the MS. Unresolved enmity originating from the physical violence of his first stepfather could have added to an inner conflict.

Recently there has been increasing interest in the correlation of MS lesions, as seen on MRI, and neuropsychological impairment. In a study by Rao (1989) a strong correlation of the total lesion load with neuropsychological testing was found. A correlation of psychiatric disorders with MRI lesions in the temporal lobes has been reported by Honer (1987). Our patient showed bilateral MRI lesions in the medial part of his temporal lobes. The medial part of the temporal lobe, more specifically the hippocampus, corpus amygdaloideum and the gyrus parahippocampalis, contribute to the so-called 'limbic system'. This system is involved in memory, sexuality, and affective behaviour.

In conclusion, cognitive disturbances temporarily incapacitated impulse control and aggression regulation in a young man suffering from MS. The presence of organic lesions in the limbic system, and latent psychogenic factors, were also thought to have played a role in the development of his aggressive behaviour.

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Sudden cardiac death and antidepressants

SIR: Antidepressant use has been associated with cardiac arrhythmias and sudden unexplained deaths,