

Case report

A man who borrowed cars

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A 51-year-old man was serving a prison sentence for car robbery when his wife came to the neurology department at our hospital, in May, 1997, to ask for advice. At the age of 33, her husband had had a subarachnoid haemorrhage due to a ruptured aneurysm of the anterior communicating artery, and had undergone surgery a few days later. Up to then, he had no medical or psychiatric history, and had never been in trouble. He was married, had a daughter, and had been working for 10 years as a test driver in the same car factory. During the operation, his aneurysm ruptured again and the right pericallosal artery had to be clipped. He was discharged from hospital 1 month later, apparently well. Because of the aneurysm, he was not allowed to resume his previous work and was given an administrative job, in an office above the car park. A few weeks later, he took one of the cars, which were routinely kept with the keys in the ignition, drove to his home, and parked close by. He repeated this behaviour several times over the next few weeks, accumulating borrowed cars in the vicinity of his house. He apparently thought he was playing some kind of joke on his employer. He was arrested by the police. This was the first incident of its kind in a long series. Over the next 17 years, he spent about 8 locked up, during more than a dozen stays in prison. His misdemeanours were stereotyped. During periods of idleness and depression, he suffered from a compulsive urge to borrow a car. He would then drink some alcohol and go out looking for a car with the keys left in the ignition, which he took for only a short ride. Although he was well aware that this was illegal, borrowing cars gave him a kind of pleasurable relief. He never tried to sell the cars, but simply abandoned them in isolated places. He estimated that over the years he had borrowed close to 100 cars. Since his haemorrhage, he had become incapable of holding a job for more than a few weeks or months at a time, owing to his unpunctuality and the consequences of his compulsion. He also had periods of reactive depression. He was given psychotherapy, and was treated variously with clomipramine, valpromide, paroxetine, and bromazepam for brief periods. Neither medication or psychotherapy had clear-cut benefits. After his release from prison, he was admitted to hospital for neuropsychological assessment. Clinical examination was normal. Neuropsychological screening revealed no impairment of language, attention, calculation, motor coordination, visuospatial processing, or reasoning. There was no impairment of memory.

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Axial SPECT showing reduced blood flow in the right mesial orbitofrontal region

Tests of prefrontal function, including the Wisconsin card-sorting test, the Stroop test, the trail making test, semantic and phonemic word generation, serial subtraction, and relevant subtests of the WAIS-R were normal.

CT-scan showed a small lesion in the right orbitofrontal paramesial region. Single-photon emission CT (SPECT) showed greatly reduced blood flow in the same region (figure). When we last heard, in October, 1997, he was having psychotherapy and had not relapsed to borrowing cars.

A mesial orbitofrontal cerebral lesion induced dramatic behavioural changes which were in sharp contrast with this man's premorbid personality. Although they do not appear listed as neurological symptoms, compulsive disorders should be considered as neuropsychological impairments. Orbitofrontal lesions are known to induce acquired psychopathy.¹ In making decisions, affected people are insensitive to the future consequences of their actions, although they are rationally aware of likely detrimental outcomes. Metabolic abnormalities in the right orbitofrontal cortex have also been related to obsessive-compulsive behaviour.² Such disorders may occur in the absence of any deficit in conventional neuropsychological tests that are sensitive to dorsolateral prefrontal lesions.³ Although such dramatic forms of lesion-induced behavioural disorders as we report may be rare, similar cases should be recognised, in order to allow patients appropriate treatment and legal protection.

References

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