Transient global amnesia after whiplash trauma

Sir: Transient global amnesia is characterised by an episode of spontaneously occurring confusion of several hours' duration, with loss of memory for recent events and inability to recall newly acquired information.1 The pathophysiological basis is incompletely understood. Epileptic aetiology has been suggested,1 but most recent authors favour transient vascular insufficiency in parts of the limbic system related to memory function.2

Some cases of otherwise typical transient global amnesia but occurring in immediate relation to direct head trauma or whiplash neck trauma, have been reported.3,4 The present report, which is based on an accurate eyewitness description, concerns a patient with transient global amnesia precipitated by whiplash trauma. We believe this is the second published case of its type.

The patient was a 68-year-old woman in good health, except for mild hypertension and mild obstructive lung disease for which she received treatment with trichlormethiazide and theophylline. She was employed in a bakery chain, working in different shops changing from day to day according to the owner's need. On the day of the accident (day 1) she was riding in a bus to visit a relative, having ended that day's work. The following account was given by one of the fellow passengers, who watched the patient closely during the incident. The patient was standing near the driver, facing the back of the bus, when the bus stopped abruptly. She fell straight backwards, and hit the edge of the entrance steps with her shoulders. Her head was thrown sharply backwards down into the steps. There was no direct head trauma. For a few seconds the patient did not move, but was then helped onto her feet and was immediately fully alert. She held her head and said repeatedly "it feels so strange". She then complained about stiffness in her shoulders and asked "where am I—why am I on this bus?" Despite being answered, she repeated the questions several times. She knew her name and address. She denied being injured, and did not want to be brought to the city emergency centre. However, the driver called for an ambulance, and upon the arrival the patient stepped down from the bus without support.

On admission to the Department of Neurology a few hours later she was confused and had a deficient recent memory. She knew her name and address, recalled that she had been at work, but did not remember in which shop she had been that day. She remembered bringing the bakery's money to a bank as usual, and thought that she had planned to visit a relative. Neurological examination disclosed no other abnormalities. General medical examination was normal, and she had no sign of head trauma. The next morning her memory function was normal. The retrograde amnesia was less; she was now able to remember all events of the previous day up to a moment immediately after she had entered the bus, one stop before the accident. She had, however, a loss of memory from that moment until the next morning, with only glimpses of recollection from the time at the city emergency centre and the first evening in the hospital. During the rest of her stay, she complained of dizziness, which gradually improved. EEG performed on day 4, was normal, as was a cerebral CT scan on day 7. Radiological examination of the cervical spine showed severe degenerative changes, but no fracture or other traumatic lesion. Blood count and serum chemistry were normal. The patient was discharged from hospital on day 8. At follow-up on day 18 she still had some dizziness, but no headache or other disability. At a second follow-up, 20 weeks after the accident, she was without residual complaints. Her amnesia was unchanged from day 2.

The two essential clinical features of this case are the traumatic incident and the amnesic episode. The eyewitness account leaves no doubt that the patient experienced a whiplash trauma, and not a cerebral concussion. The amnesic episode possessed all typical clinical characteristics of transient global amnesia except the spontaneous occurrence. To our knowledge, only one case of this kind has been published earlier. Miller Fisher in 1982 reported a patient who experienced the period of global amnesia, starting acutely after whiplash trauma caused by the car she was sitting in being struck from behind by a truck.5 The person sitting beside the patient observed that the patient's head made a whiplash movement, but did not strike the windshield. The patient recovered within 72 hours, without sequelae. Miller Fisher felt that more such cases, to which he designated the term "whiplash amnesia", would be necessary to draw any conclusions whether this represented a distinct clinical entity. We think that our case, which is essentially identical, lends support to such a concept. Furthermore, the condition may not be uncommon, but rather rarely recognised owing to lack of adequate eyewitness observations. Although inferences about the pathogenesis of a disease on a purely clinical basis may seem inadequate, we think that the amnesia occurring momentarily after hyperextension neck trauma, most probably was caused either by direct mechanical injury or by acute vascular insufficiency, and not by epilepsy discharge. Hyperextension of a severely spondylarthritic neck may well impede vertebral artery blood flow, causing ischaemia of parts of the vertebrobasilar supply area within which the structures involved in memory are located.

References


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Isoniazid and action tremor in multiple sclerosis

Sir: I was pleased to see the letter from Morrow et al. confirming some utility for isoniazid for postural action tremor in multiple sclerosis even though my name was badly misspelled in their reference to our work. There have been a number of discrepant reports about isoniazid, and I suspect that a major reason has been lack of attention to the precise type of tremor being treated. The patients described by Morrow et al. are similar to the ones that we have studied; confirmation of efficacy in a double-blind trial is now in press.

I was particularly interested in the findings of Morrow et al. about weakness and increase of spasticity with isoniazid. We have seen this also in a few patients who have primarily complained of increased "stiffness" of their legs. One patient was bothered enough by this stiffness that he decided to stop taking the isoniazid after a few months even though his tremor was diminished by the drug. We have not made any physiological studies of this symptom. I have taken this phenomenon as further evidence that isoniazid influences the motor system, and that its effect on tremor is not purely psychological.

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Notice

International Congress for Clinical Neuroimaging will be held in Vienna, 5-7 June 1986. Information may be obtained from: Secretariat International Congress for Clinical Neuroimaging, c/o Vienna Academy of Medicine, Alser Straße 4, A-1090 Vienna, Austria.

References
