Expert Opinion

Transient Visual Loss, Lower Extremity Monoparesis, and Sudden Sharp Headaches Precipitated by Long Car Trips

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Transient visual loss, lower extremity monoparesis, and thunderclap headaches precipitated by long car trips? You haven't heard of this? It's Purdy syndrome.

CLINICAL HISTORY

This is a 53-year-old white male who has had about 12 spells in the last year. The episodes are almost all the same and only occur if he is either driving or a passenger in a car for over 1 hour. When he gets out of the car and starts walking with a latency of about 30 seconds, he develops blurred vision where the entire field of vision is almost gray. The right lower extremity becomes weak and he drags it. In the last two episodes, the right leg was so weak that he went down to his knee. His head drops and he has to lift it up but then it drops again. The visual and right lower extremity symptoms have been lasting 10 to 15 seconds, but the last two episodes have lasted a couple of minutes.

These initial symptoms are immediately followed by a sudden sharp pain on the top of the head with an intensity of 10/10 lasting 5 minutes like his head is going to explode. There is no associated nausea, light or noise sensitivity. There is no speech disturbance or paresthesias associated with the episode. With the one recent spell, he sat down at the onset, and the symptoms were better but then he stood up and he had a complete attack. He did have one episode while sitting but all the others were precipitated after driving at least an hour.

He has not had any plane trips in the last year. He has had three fishing trips in the Galveston Bay with a duration of 3 to 5 hours but these did not precipitate spells. If he has a driving trip of more than 1 hour but stops every 30 minutes and walks around the car just briefly, he will not have a spell.

At the age of 12 years, he reports having spells where the right side would be paralyzed and the tongue and jaw would go to one side lasting only seconds. He recalls having about five episodes at the age of 12 years and then none since. He also recalls having mild headaches after these episodes. He was on a seizure drug, which he believes may have been diphenylhydantoin, which he took for about 10 years. He has no history of any other type of headaches. There is a past medical history of hypertension. Neurological examination was normal.

A MRI and MRA of the brain were normal. A carotid ultrasound was normal. A cervical spine MRI showed a bulging C5–6 disc without spinal cord compression. A routine EEG was normal. An ambulatory EEG done while driving and during and after an episode was normal. Cardiac evaluation including a stress test and echocardiogram were normal.

Questions.—What is the cause of the episodes? What treatment would you recommend?

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EXPERT OPINION

The cause of these spells is uncertain, but at first assessment they do not appear to be functional or psychiatric in nature and not likely migraine. We have never seen a case of inhibitory motor phenomena like this with migraine and the patient does not meet the new IHS diagnostic criteria for migraine, basilar-type migraine, or even probable migraine. We have also never seen prominent "positive" or "negative" features in migraine that predominantly involve the leg; hemiplegic migraine is not restricted to one limb, although as a child he had paralysis on the right side, but it is uncertain if this was hemiplegic.

Gowers in his famous monograph[1] said, "The aura of this [seizure] may start in the foot or the hand. That of migraine very seldom begins in the lower limb. I have never met with onset in the foot, and I have only once known the premigrainous phenomena sensation to pass to the leg…" We might be persuaded to consider the phenomena migrainous if the symptoms had "switched sides," but did not occur in this.

We feel the present attacks could be epileptic in nature. The "normal" EEG is not helpful. The ambulatory EEG is interesting; the technical quality and number of recording channels was not mentioned but simple partial seizures are notorious for having no ictal rhythm on scalp telemetry. If these are seizures, they likely are of occipital lobe origin with frontal spread to create the inhibitory motor features outlined in the case. The stereotypy and duration of attacks would favor a seizure but the "postictal" pain is problematic, as are the precipitating factors. Nevertheless, Young and Blume[2] have described ictal pain in seizures arising from the secondary sensory area, but the discomfort in their cases was not like this patients symptoms. He does not have the hemicranial pain of hemicrania epileptica, as suggested by the new IHS criteria.[3] In fact his headache symptoms are really not specific in nature. One factor most against a seizure mechanism is the fact that the attacks have never occurred with him sitting or lying.

His story at age 12 years might have been Benign Rolandic Epilepsy of Childhood;[4] this seems possible because of the age of onset, some of the clinical features (although ictal paralysis is very uncommon in this disorder), and spontaneous disappearance. It would helpful to know if they occurred in association with sleep and if he had typical Rolandic spikes at that age on his EEG. We do not consider his "weakness" is cataplexy, and he lacks other characteristics of narcolepsy or other sleep disorders.

Finally, we wonder if this could be an unusual manifestation of presyncope? The postural component, possible abortion by sitting down one time and intensification with immediate standing, and the onset with bilateral visual symptoms make this the most likely diagnosis in our opinion. It would be most interesting to see if he could have an attack with tilt-table testing and we would suggest that as a next test. The cardiac investigations done so far are not sufficient to rule out or make that diagnosis. We have seen some individuals have some element of headache after neurocardiogenic syncope but usually not to the degree noted in this case, although the association is known.[5]

Further, we wonder if his MRA demonstrated anything, acquired or congenital, that might make the left anterior cerebral distribution (ie, his "leg" area) susceptible to a drop in perfusion pressure? The next time he has an attack he should lie down and not sit, as this could be diagnostic. We would also favor an ultra-high resolution thin section MRI with specific attention to the left occipital lobe. If he could have one spell reproduced and have an ictal SPECT scan, it might be interesting, but this may not be practical.

All diagnosticians find that some paroxysmal events are hard to diagnosis in neurological terms. We are all taught, "common things are common" and thus of the usual diagnostic triad of "fit, faint, or funny turn," we favor "faint," the headache being an epiphenomena and probably unrelated. If our further diagnostic suggestions fail to make a definitive diagnosis in this case, we would favor empirical therapy with a medication directed toward treating both seizures and migraine, in the first instance. One final thought, if all his spells occurred while driving in one particular car it might be worth getting his muffler checked, because, as improbable as it might seem, carbon monoxide exposure could trigger these symptoms!

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