Single photon emission tomography as a predictor of outcome in vegetative state of head injury

Sir,

In a recent study, Nayak and Manepatra,[1] based on studies in 50 patients remaining in vegetative state (now referred to as "unresponsive wakefulness syndrome" (UWS)/2/),[2] stated that assessment of cerebral perfusion by single photon emission tomography (SPECT) is a better predictor of outcome than computerized tomography and/or magnetic resonance tomography. Already in 1972, SPECT measurement of total and regional cerebral blood flow (CBF) in patients with "apallic syndrome" following severe brain injury was shown to be an important tool for estimating the prognosis of these patients.[3] Correlation of CBF using SPECT and neuropathology in eight patients with vegetative state after brain injury revealed significant correlations between the decrease of CBF and the extent and pattern of brainstem damage, in particular with the degree of affection of the ascending activating reticular formation.[4] This association was later confirmed by positron emission tomography studies of CBF and glucose utilization in vegetative patients, involving, also, the cerebral cortex, basal nuclei and cerebellum.[5] However, there is still a need for prospective studies on the prognosis of the UWS in large, well-described cohorts of patients using standardized assessment and outcome scales.[2]

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References

1. Nayak P, Mahapatra AK. Single photon emission computed tomography scanning: A predictor of outcome in vegetative state of head injury. J Neurosci Rural Pract 2011;2:12-6.
2. Laureys S, Celesia GG, Cohadon F, Lavrijsen J, León-Carrión J, Sannita WG, *et al*. Unresponsive wakefulness syndrome: A new name for the vegetative state or apallid syndrome. BMC Med 2010;8:68.
3. Heiss WD, Gerstenbrand F, Prosenz P, Krenn J. The prognostic value of cerebral blood flow measurement in patients with the apallic syndrome. J Neurol Sci 1972;16:373-82.
4. Heiss WD, Jellinger K. Crebral blood flow and brain stem lesion. J Neurol 1972;203:197-209.
5. Levy DE, Sidtis JJ, Rottenberg DA, Jarden JO, Strother SC, Dhawan V, *et al*. Differences in cerebral blood flow and glucose utilization in vegetative versus locked-in patients. Ann Neurol 1982;22:673-82.

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Quick Response Code:	Website: www.ruralneuropractice.com
	DOI: 10.4103/0976-3147.91982