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LETTER TO THE EDITOR

The vegetative state: A syndrome seeking revision?

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The vegetative state is characterized by the absence of awareness (of self and environment), voluntary or otherwise purposeful behaviours and communication in the severely brain damaged [1]. An independently classified condition with minimal, but definite behavioural evidence of environmental awareness, the minimally conscious state [2] is an option evolution from the vegetative state and preliminary to the recovery of consciousness. Aetiology and the (metabolic) frontal-parietal long-range network dysfunction reportedly responsible for the underlying '*functional disconnection*' between the brainstem and cortex are common to the two conditions [3]. Boundaries remain somehow blurred and misdiagnosis reportedly up to 30–40% [4].

Research in the vegetative state by advanced neuroimaging techniques (such as PET or fMRI) have documented stimulus- or condition-related regional brain activation indicating retained connectivity, partial functional integrity in segregated networks and surviving modular function in the absence of the integrative processes necessary to consciousness [3]. Scientifically seminal, these observations also enlarge the clinical scenario and have started a tacit scrutiny of the anatomofunctional conditions underlying the vegetative and minimally conscious states and determining evolution and recuperation of consciousness. It should be noted that any functional differentiation between these conditions has potentially far-reaching implications in the bioethical evaluation [5], commitment and allocated resources, health policies, indication for passive/active abandonment, etc. Today, the diagnosis of the vegetative and minimally conscious states conventionally rests on clinical criteria eventually supported by established evaluation scales; diagnosis by methodologies such as advanced neuroimaging, that the medical community worldwide has not always easy access to, would be biased by availability and therefore add to the existing national differences in the medical, legal or popular [5] perception.

The vegetative and minimally conscious states do not appear homogeneous conditions any longer. The existence of a spectrum disorder of consciousness remains a scientific/clinical issue, but a pathophysiological process evolving after brain injury from coma to consciousness, along which the vegetative and minimal conscious states are definable phases, does not appear inconceivable. In this respect, the residual brain activation observed by fMRI or PET could introduce discrepancies in the current descriptive categories or accuracy of diagnosis. The vegetative state was once indicated as a 'syndrome in search of a name' by Jennett and Plum in 1972 [6]; a formal nosographic revision would be warranted today.

Declaration of Interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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