Evaluating patients the new-fashioned way

In this issue Lombardi et al. present the Italian version of the JFK Coma Recovery Scale – Revised (CRS-R) (1). The aim of the original Coma Recovery Scale, designed and evaluated by Giacino et al. in 1991, was to characterise and monitor patients functioning at levels I to IV on the Levels of Cognitive Functions (LCF) scale (2). The revised version (CRS-R) was published in 2004 (3). The scale, with its detailed items, was intended to detect subtle signs of recovery of consciousness and was specifically developed to differentiate patients in a vegetative state (VS) from those in the minimally conscious state (MCS), and to identify patients recovering from the MCS.

In the management of severely brain-damaged patients with altered states of consciousness, differential diagnosis between VS and the MCS is a major challenge, especially when dealing with the grey zone between these clinical entities. The MCS is distinguishable from the VS by the partial preservation of conscious awareness. In fact, as proposed by The Aspen Neurobehavioral Conference Workgroup, the MCS is a condition of severely altered consciousness in which minimal but definite behavioural evidence of self or environmental awareness is demonstrated (4). Accordingly, to make a diagnosis of MCS, limited but clearly discernible evidence of self or environmental awareness must be demonstrated, on a reproducible and sustained basis, through one or more of the different possible behaviours (5,6). In the MCS, cognitively mediated behaviour is inconsistent, but reproducible or sustained long enough to be differentiated from reflexive behaviour. Extended assessment may be required to determine whether a simple response (e.g. a finger movement or eye blink) that is observed infrequently is elicited by a specific environmental event (e.g. command to move fingers or blink eyes) or merely coincidental. In contrast, a few observations of a complex response (e.g. intelligible verbalisation) may be sufficient to determine the presence of consciousness. This distinction is important for prognosis, treatment decisions, resource allocation, and medico-legal aspects.

Moreover, recovery from the MCS to higher states of consciousness occurs along a continuum whose upper limit is necessarily arbitrary. Consequently, the diagnostic criteria for emergence from the MCS are based on broad classes of functionally useful behaviours that are typically observed as these patients recover. Such behaviours have all been included in the JFK CRS-R which allows the physician to track properly the course of the recovery.

The interest shown by a dedicated group of Italian physicians, with long-standing clinical experience and expertise in the field, in translating the scale is noteworthy and underlines the need for an easy and reliable instrument to support the diagnosis of both VS and the MCS and the tracking of the possible temporal variations in the above-mentioned neurological conditions. The Italian version, obtained under the supervision of the principal author and applying the most appropriate methodology, is now available thanks to the outstanding work of the authors. The JFK CRS-R is an important evaluation instrument, useful in clinical and research settings, in the instruction and training of physicians, residents in neurology and in physical rehabilitation medicine, physiotherapy students, and nurses who will be or are already involved in the management of patients with disorders of consciousness. Analysis of interrater and test-retest reliability, internal consistency, concurrent validity, and diagnostic accuracy will be performed as soon as the Italian version is in widespread use in the everyday practice of centres involved in the care of this category of patients.

In conclusion, while thanking Doctor Giacino for his confidence in our ability to obtain the best possible translation, I applaud the enthusiasm and efforts of the authors and welcome the Italian version of the JFK CRS-R as a starting point that will allow our dedicated teams to accurately characterise, treat, and study patients in a vegetative or minimally conscious state.

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References