

2 Years outcome of patients in unresponsive wakefulness syndrome/vegetative state and minimally conscious state

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Objectives

Following severe acute brain damage, patients typically evolve from coma to an unresponsive wakefulness syndrome/vegetative state (UWS/V_S; wakefulness without awareness)^{1,2} and later to a minimally conscious state (MCS; fluctuating but consistent non-reflex behaviors)³. MCS is subcategorized in MCS+ (i.e., command following) and MCS- (i.e., visual pursuit, localization of noxious stimulation or contingent behaviours)⁴. Reliable and consistent interactive communication and/or functional use of objects indicate the next boundary – emergence from MCS (EMCS)³.

To date, there is still no reliable predictive model of recovery from the UWS/V_S and the MCS. A better understanding of patients' outcome would help in decisions regarding patients' care and rehabilitation, as well as end-of-life decisions.

Methods

We collected demographic information, acute care history and longitudinal follow-up of patients in UWS/V_S and MCS admitted in 15 expert centers in Belgium (via the Belgian Federal Public Service Health) (Fig. 1). The diagnosis was based on internationally accepted criteria of UWS/V_S, MCS or EMCS. Results were considered significant at p<0.001.



Fig. 1. Patients were assessed at 1, 3, 6, 12 and 24 months post-injury with the Coma Recovery Scale-Revised⁵.

Results

24 months follow-up was available for 476 patients including 261 diagnosed in UWS/V_S (88 traumatic, 173 non-traumatic) and 215 diagnosed in MCS (80 traumatic, 135 non-traumatic) one month after the injury.

Patients who were in MCS one month after the insult were more likely to recover functional communication or object use after 24 months than patients in UWS/V_S (Fig. 2). Moreover, functional recovery occurred more often in MCS+ (79%) as compared to MCS- (29%), and mortality rate was more important in MCS- patients (68%) as compared to MCS+ (21%).

Comparisons within UWS/V_S and MCS groups based on etiology showed that traumatic patients had a better outcome at 24 months than non-traumatic patients (Fig. 2). Among non-traumatic patients, no difference was found between anoxic patients and patients with other etiologies regarding functional recovery.

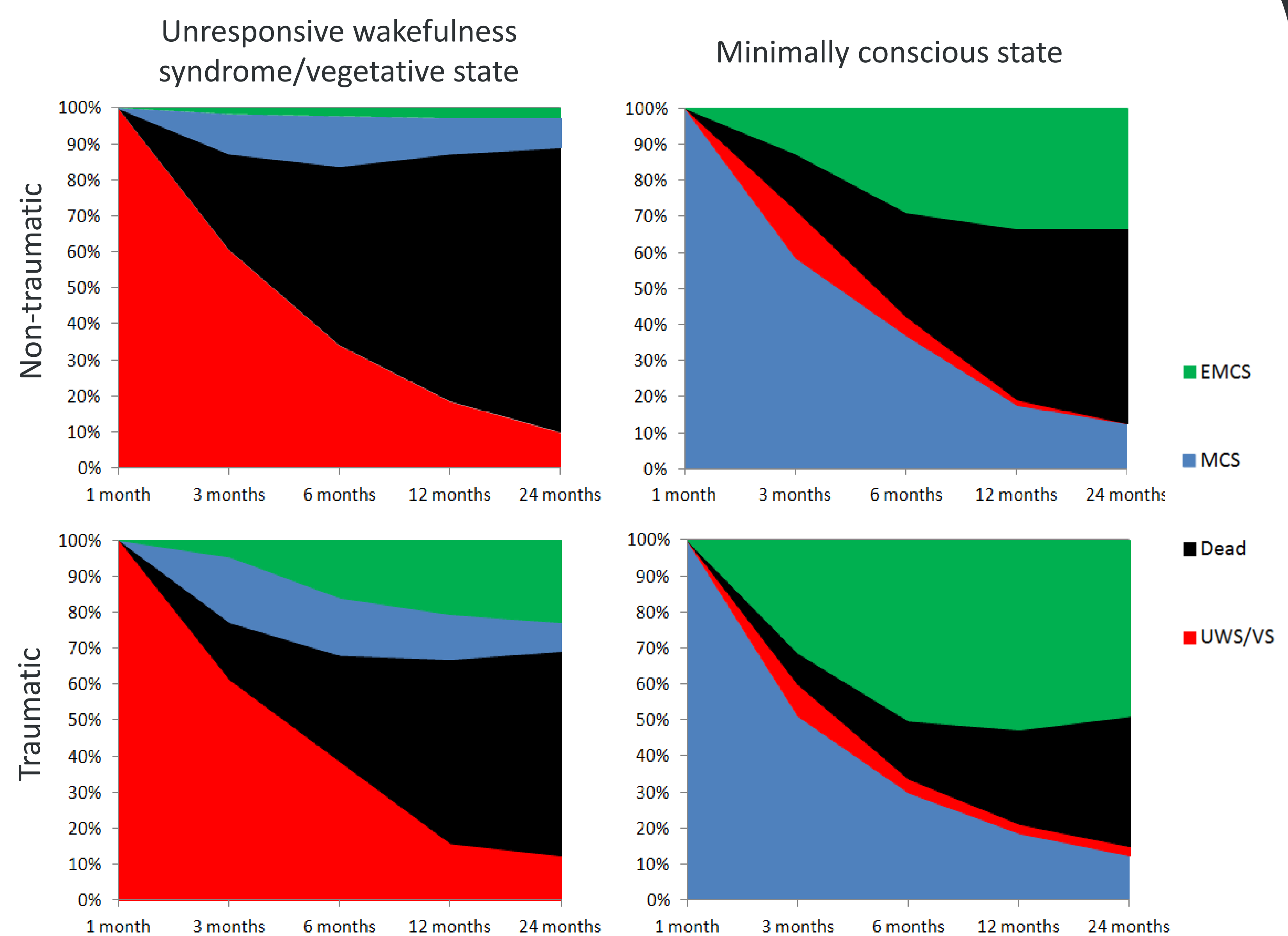


Fig. 2. Clinical evolution of VS/UWS and MCS patients at 3, 6, 12 and 24 months post-onset according to the CRS-R scores.

Conclusion

Our study highlights that the outcome is significantly better for patients who are in MCS one month post-injury as compared to patients who remain in UWS/V_S at that time. Concerning MCS patients, the outcome is significantly better for patients who are MCS+ one month post-injury as compared to patients who are MCS- at that time. This study also confirms that patients with traumatic etiology have better prognosis than patients with non-traumatic causes.

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