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Disorders of consciousness: navigating between nihilism and unrealistic hopes.

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Understanding normal and impaired consciousness is one of neuroscience and medicine's most exciting but difficult challenges. The last 3 decades have seen a dramatic engouement for this matter in many teams worldwide, from philosophy to basic science (both experimental and theoretical) and medicine.

In this special issue of *La Press Médicale QMR* we are proud and grateful to feature authors that accepted to navigate and explore these multifaceted aspects. I am sure their contributions will illuminate this subject's complexities and intricate nuances, offering the reader a comprehensive and insightful overview of the ongoing discoveries and debates that shape our dynamic field.

An increasingly large number of patients with impaired consciousness now survive life-threatening conditions owing to advances in critical care and surgical innovation. Disorders of consciousness (e.g., coma, vegetative state, and minimally conscious state) can stem from various primary brain injuries or systemic illnesses. Prognosis relied for decades on neurological examination, etiology, delay from injury and patient's condition. Recent discoveries now allow us to understand better the mechanism and the degree of brain dysfunctions and, most importantly, to elaborate a more informed prognosis for recovery. This progress helps clinicians navigate between the self-fulfilling prophecy/nihilism and medical futility.

Intensive care units (ICU) and rehabilitation centers are now at the leading frontier in investigating coma science [1], with a growing number of research

groups focusing on this matter joined in the “Curing Coma Campaign” international effort [2].

Neuroimaging and electrophysiology paradigms have become an integral component of assessing disorders of consciousness in many places, offering insights into the functional status of the brain even in the absence of behavioral responsiveness. One of the most striking examples is probably the detection of “cognitive-motor dissociation” in acute ICU patients. This state in which clinically unresponsive patients seem to understand and obey verbal commands probably unravels patients’ emerging consciousness which explains its high predictive value [3].

Improving patient stratification is anticipated to catalyze the evolution of personalized therapeutic interventions under development. Hopefully, each patient’s unique neurophysiological and cognitive profile, intricately mapped and understood, will soon inform potential tailored treatment trajectories, marking a paradigm shift in the care and rehabilitation of patients with impaired consciousness and helping navigate between nihilism and unrealistic hopes.

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