The Curing Coma Campaign: Framing Initial Scientific Challenges—Proceedings of the First Curing Coma Campaign Scientific Advisory Council Meeting

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Abstract
Coma and disordered consciousness are common manifestations of acute neurological conditions and are among the most pervasive and challenging aspects of treatment in neurocritical care. Gaps exist in patient assessment, outcome prognostication, and treatment directed specifically at improving consciousness and cognitive recovery. In 2019, the Neurocritical Care Society (NCS) launched the Curing Coma Campaign in order to address the “grand challenge” of improving the management of patients with coma and decreased consciousness. One of the first steps was to bring together a Scientific Advisory Council including coma scientists, neurointensivists, neurorehabilitationists, and implementation experts in order to address the current scientific landscape and begin to develop a framework on how to move forward. This manuscript describes the proceedings of the first Curing Coma Campaign Scientific Advisory Council meeting which occurred in conjunction with the NCS Annual Meeting in October 2019 in Vancouver. Specifically, three major pillars were identified which should be considered: endotyping of coma and disorders of consciousness, biomarkers, and proof-of-concept clinical trials. Each is summarized with regard to current approach, benefits to the patient, family, and clinicians, and next steps. Integration of these three pillars will be essential to the success of the Curing Coma Campaign as will expanding the “curing coma community” to ensure broad participation of clinicians, scientists, and patient advocates with the goal of identifying and implementing treatments to fundamentally improve the outcome of patients.

Keywords: Coma, Endotype, Biomarker, Consciousness, Recovery

Coma is a clinical condition common across numerous acute neurological disorders and non-neurological disorders (such as drug overdose and decompensated metabolic disease). Coma can herald long-lasting...