

EXPLORING DISCONNECTED CONSCIOUSNESS EPISODES AMONG PATIENTS IN ALTERED STATES OF CONSCIOUSNESS IN THE RESUSCITATION ROOM: PRELIMINARY RESULTS

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Background: Following emergency care, some patients can report vivid inner events, known as disconnected consciousness (DC), including near-death experiences (NDEs).

Aims: (1) Determine the prevalence of DC in resuscitation room (RR) patients and compare their demographic, clinical, and cognitive characteristics with those without such episodes. (2) To examine EEG-derived neurophysiological profiles, particularly Lempel–Ziv Complexity (LZC).

Methods: Patients were prospectively recruited and classified as conscious (Glasgow Coma Scale [GCS] score=15) or in altered state of consciousness (sedation, intubation, cardiopulmonary resuscitation, or GCS<15). Medications and clinical parameters were recorded. When possible, a 6-channel EEG was performed. Patients were assessed within 3 days after admission/awakening and followed up at 2 and 6 months. The prevalence and content of DC episodes were evaluated through semi-structured interviews and the NDE-C scale. Psychological and perceptual profiles were assessed using the Dissociative Experience Scale (DES) and the Threat Perception Scale (TPS).

Preliminary results: During a 2-year period, 384 patients were referred to our team and 132 were enrolled. Among them, 76 completed the first interview: 35 (46%) were conscious, and 41 (54%) met the criteria for an altered consciousness. The median age of included patients was 62 yo (IQR = 26) and 27 (66%) were men. Main admission causes were cardiocirculatory events (34%) and severe trauma (15%). Median minimum GCS was 4, and median RR length of stay was 130min. Among the 41 evaluated patients, 11 (27%) reported DC episodes. Six (15%) scored above the NDE-C cut-off (>27), categorized as NDE+. Comparing NDE+ ($n=6$) and NDE- ($n=35$) patients, revealed no significant differences in age, minimum GCS, or RR length of stay, nor for sex ($p>.05$). NDE+ patients showed significantly higher scores on the NDE-C scale (median = 42 vs 5; $p<.001$) and on the DES (median = 36.97 vs 7.86; $p=.002$). TPS scores were also higher in the NDE+ group (median = 25 vs 12), though this did not reach significance ($p=.054$). No significant differences were found for medication exposure ($p>.05$). Preliminary EEG analyses were performed on 11 recordings (7 NDE-, 4 NDE+). LZC values were significantly higher in NDE+ patients compared with NDE- ($p=.043$ and $p=.006$ respectively).

Discussion: Preliminary results show NDEs in 6 RR patients, independent of clinical factors but linked to higher dissociation. EEG trends suggest increased LZC in NDE+.

Keywords: Disconnected consciousness, Near-death experiences, Neurophysiological markers, Memory

Publications:

Fritz, P., Pichelin, A., Ancion, A., Alnagger, N., Lejeune, N., Ghuysen, A., Gosseries, O., & Martial, C. (2025). Near-death experience during emergency ketamine use: A case report. *Brain and Behavior*, *15*(10), e70939. <https://doi.org/10.1002/brb3.70939>

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