

BRIDGING DISCIPLINES TO RESTORE LIVES: A CASE OF INTERDISCIPLINARY NEURO-REHABILITATION IN HYPOXIC BRAIN INJURY

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Background

Hypoxic brain injury (HBI) is a devastating condition caused by oxygen deprivation, often leading to profound cognitive and motor disabilities. Recovery depends on early intervention and sustained, specialized long-term rehabilitation. We present the journey of a 36-year-old woman (EE), who after cardiac arrest in September 2022, underwent a complex interdisciplinary rehabilitation from a minimally conscious state to functional reintegration.

Case report

Initially admitted with a Glasgow Coma Scale (GCS) of 4, EE required ICU care. After stabilization, rehabilitation began at Santo-Stefano Rehabilitation, Villa Fastiggi, Italy. Initial Phase (Oct 2022-May 2023): In a minimally conscious state with severe diffuse spasticity and requiring enteral feeding, she received passive mobilization, cognitive stimulation, and reintroduction of oral feeding. Mid Phase (Sept 2023-July 2024): Orthopedic surgeries addressed contractures and joint issues, including tendon lengthening and total hip replacement. Rehabilitation emphasized mobility recovery, weight-bearing, and continued cognitive, speech, and swallowing therapy. Final Phase (July-Aug 2024): EE gained partial independence in activities of daily living (ADLs), independent wheelchair use, and ambulation with two crutches. Functional scores showed remarkable gains: FIM score increased from 18 to 103; CRS-R cognitive score improved from 9 to 24; mobility rose from 10% to 75%.

Conclusion

Physiatrists, neurologists, internists, ward physicians, orthopedic surgeon, physical therapists, psychologists, speech therapists, social workers, nurses and health-care assistants collaborated daily, each in his/her vital role in clinical monitoring, skin care, emotional support, and fostering early mobility. This case is a testament to the power of true interdisciplinary collaboration. At Santo-Stefano Rehabilitation-Villa Fastiggi, each professional's contribution built a pathway to recovery, proving that even in severe brain injuries, structured teamwork can reawaken potential, save brains and restore lives.

Keywords: Neuroplasticity, Neuro-Motor Recovery, Interdisciplinary Team