

A multidisciplinary approach integrating the causality algorithm to diagnose and treat organic causes of catatonia in children and adolescents with autoimmune disorders

Introduction: About 20% of juvenile catatonia is associated with an organic condition. The presence of autoimmune disorders and biomarkers represents a diagnostic and therapeutic challenge. This study applied two distinct but converging methods to identify and diagnose organic causes of catatonia and their treatments. The case report discusses symptoms, guidelines, and recommendations for future diagnosis and treatment of this complex condition.

Methods: The literature review [PMID: 18417262; PMID: 28659239] identified a clinical strategy for diagnosis and treatment. A multidisciplinary diagnostic approach, CAUS, ROC analysis, and systematic immunosuppressive therapy were applied to identify and treat underlying organic diseases of catatonia.

Results and discussion: A 17-year-old female displayed catatonia and lupus-like symptoms with increased ANA and RNP antibodies levels. A comprehensive clinical workup was done to rule out organic causes of catatonia. She was given high doses of steroids for five days with minimal improvement, inferring that her symptoms may be due to her history of Bipolar Disorder. Her symptoms of catatonia improved with 16mg of Lorazepam per day. ROC analysis showed that the Causality Assessment Score rating (CAUS) performance in discriminating both organic catatonia vs. non-organic catatonia and autoimmune catatonia vs. non-organic catatonia was excellent (Area Under the Curve = 0.99). In both analyses, for a CAUS threshold ≥ 5 , accuracy equaled 0.96. **Conclusion:** This case emphasizes the importance of a multidisciplinary (anamnesis, neurological and systemic symptoms, CAUS and ROC) approach in investigating organic causes of catatonia and autoimmune related conditions in children and adolescents to tailor the appropriate treatments.