Antiganglioside antibodies determine the clinical severity and predict response to therapy in Egyptian children with Guillain-Barré Syndrome


ABSTRACT

Introduction: Guillain-Barré Syndrome (GBS) is an acute immune-mediated peripheral neuropathy with a highly variable clinical course and outcome.

The aim: to assess the frequency of different electrophysiological subtypes and antiganglioside antibodies in Egyptian children with GBS and their association with clinical severity, and response to therapy.

Patients and Methods: A prospective study included 47 patients fulfilling international criteria for GBS. Plasma levels of antiganglioside antibodies were measured on admission by (ELIZA). GM1, GM2, GD1a and GD1b subtypes were tested. Nerve conduction studies were performed after 2 weeks of onset of neurologic symptoms. Management was started immediately by intravenous immunoglobulins (IVIG). If IVIG failed to do any clinical improvement, five sessions of plasmapheresis was performed.

Results: In the present study AMAN subtype constituted a major form of GBS, 49%. In the AMAN group a significant number of patients, 16 (73%) had antiganglioside antibody positive results, (P = 0.006). GM1b was significantly higher in the AMAN group than in the AIDP group. Clinical presentation in antiganglioside positive patients was frequently associated with antecedent diarrhea and showed severe motor weakness necessitating mechanical ventilation than did seronegative patients, P value (< 0.0001, 0.025) respectively. Most antiganglioside positive patients, 20 (95.5%) failed to respond to IVIG and responded well to plasmapheresis, p value (<0.0001) compared with patients in the seronegative group.

Conclusion: Antiganglioside antibodies positive patients constitute a major subtype among Egyptian children with GBS. They may be more reliable than electrodiagnosis in determining the clinical severity and predicting the ongoing response to therapy.

Key word: Acute inflammatory demyelinating polyneuropathy, Acute motor axonal neuropathy, Antiganglioside antibodies, Guillain-Barré Syndrome, Intravenous immunoglobulin, Plasmapheresis