

## Relevance of Brain Stem Evoked Potential in Diagnosis of Central Demyelination in Guillain Barre' Syndrome

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**Abstract :** Guillain Barre' syndrome (GBS) is an auto-immune mediated demyelination poly-radiculo-neuropathy. Clinical features include progressive symmetrical ascending muscle weakness of more than two limbs, areflexia with or without sensory, autonomic and brainstem abnormalities, the purpose of this study was to determine subclinical neurological changes of CNS with GBS and to establish the presence of central demyelination in GBS. The study was prospective and conducted in the Department of Physiology, Pt. B. D. Sharma Post-graduate Institute of Medical Sciences, University of Health Sciences, Rohtak, Haryana, India to find out early central demyelination in clinically diagnosed patients of GBS. These patients were referred from the department of Medicine of our Institute to our department for electro-diagnostic evaluation. The study group comprised of 40 subjects (20 clinically diagnosed GBS patients and 20 healthy individuals as controls) aged between 6-65 years. Brain Stem evoked Potential (BAEP) were done in both groups using RMS EMG EP mark II machine. BAEP parameters included the latencies of waves I to IV, inter peak latencies I-III, III-IV & I-V. Statistically significant increase in absolute peak and inter peak latencies in the GBS group as compared with control group was noted. Results of evoked potential reflect impairment of auditory pathways probably due to focal demyelination in Schwann cell derived myelin sheaths that cover the extramedullary portion of auditory nerves. Early detection of the sub-clinical abnormalities is important as timely intervention reduces morbidity.

**Keywords :** brainstem, demyelination, evoked potential, Guillain Barre'

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