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**Original article:**

**Nerve conduction studies in recently diagnosed untreated hypothyroid patients.**

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**Abstract**

Objectives- The purpose of this study is to evaluate objectively the functional changes in peripheral nerves of recently diagnosed untreated hypothyroid subjects by electrodiagnostic tests in order to estimate the frequency of nerve conduction abnormalities.

Methods- A cross sectional analytical study was performed in adult patients recently diagnosed with thyroid dysfunction, but not placed on hormone replacement therapy. Patients with biochemical evidence of hypothyroidism were enrolled for the study.Nerve conduction study was carried out and parameters namely distal latency, amplitude and conduction velocity were assessed in median,ulnar, peroneal and sural nerves.

Results- 75% patients had distally located paresthesias, 55% complained of cramps and 15% had weakness of the lower limbs .In 19 % subjects both motor and sensory nerves were involved, while in 69 % there was involvement of only sensory nerves. There was slowing of nerve conduction velocity in 71 % patients characteristically for median and sural sensory nerves. Carpal tunnel syndrome was seen in 15% patients.

Conclusion –Neuromuscular symptoms were commonly encountered. There was a predominant involvement of sensory nerves, especially the sural nerve and median nerve on nerve conduction study. Early detection can prevent structural alterations in peripheral nerves as they occur later in the course of the disease and help in initiating replacement therapy at the earliest.

Keywords: Nerve conduction, Hypothyroidism, Polyneuropathy