

A Comparison of Nerve Conduction Properties in Male and Female of 20 to 30 Years of Age Group

Gakhar¹, M., Verma², S.K. and Lehri³, A.

¹Research Scholar, Department of Sports Science, Punjabi University, Patiala (Punjab) India. Email: jaggavinay@yahoo.co.in

²Prof. (Retd), Department of Sports Science, Punjabi University, Patiala (Punjab) India. Email: satishskl@rediffmail.com

³Assistant Professor, Department of Sports Science, Punjabi University, Patiala (Punjab) India

Abstract

Objective: The study aimed to compare nerve conduction properties of both gender in 20-30 age group. Method: Total 70 subjects of both genders ranging in age between 20 to 30 years were selected as per inclusion and exclusion guidelines of the study. Nerve conduction properties of median and ulnar nerves of both genders were recorded as per set guidelines. Result: Gender has definite effects on, latency, amplitude and conduction velocity of motor and sensory nerves. These effects are not identical in different motor and sensory nerves. Females had higher amplitude and conduction velocity in both motor and sensory stimulation of median and ulnar nerves, whereas, motor and sensory latency of median and ulnar nerve is higher in males.

Key words: Gender, Median Nerve, Ulnar Nerve, H- reflex, Amplitude, Latency

Introduction

In the recent years electro-diagnostic studies have been identified to play a key role in the evaluation of patients with various neuromuscular disorders. The nerve conduction studies are most often used to diagnose disorders of the peripheral nervous system. Conduction velocity of the nerves depends on the fibre diameter, degree of de-myelination and internodal distance. Motor nerve conduction studies require stimulation of a peripheral nerve while recording from a muscle innervated by the nerve. Sensory nerve conduction studies are performed by stimulating a mixed nerve while recording from a mixed or cutaneous nerve. These studies have been used clinically for many years to identify the location of peripheral nerve disease in

single nerves and along the length of nerves and to differentiate these disorders from diseases of muscle or neuromuscular junction *Aminoff (1999)*. It is a diagnostic tool for various neuropathies. The nerve conduction velocity is the speed at which an electrical stimulus passes through the nerves. The motor nerve conduction velocity (MNCV) is performed by the electrical stimulation of a peripheral nerve and by using the recording from a muscle which is supplied by this nerve. The time it takes for the electrical impulse to travel from the stimulation site to the recording site is measured. This value is called the latency and it is measured in milliseconds (ms). The size of the response called the amplitude is also measured. The motor amplitudes are measured in millivolts (mv). Routine nerve conduction study