



ELECTRODIAGNOSTIC (NCS/EMG) WORKSHOP

Organizers

Sajjad Ali
Vahe Poghosyan

Introduction

Electrodiagnostic evaluation in Clinical Neurophysiology includes Nerve Conduction Studies and Electromyography (NCS/EMG) and is an essential component of neurological evaluation of neuromuscular disorders.

It involves understanding normal physiology of the peripheral nerve and muscle and its clinical application in disease to localise and determine the site of the lesion, along the peripheral neural axis. This workshop aims to highlight these key concepts and technical aspects with lectures, videos and practical hands-on workshop sessions.

Short description

A half day hands-on workshop, with a combination of lectures and hands-on demo sessions on the following topics:

- Basic approach and technical aspects of NCS
- Clinical applications of NCS
- Analysis of spontaneous and volitional EMG activity
- Demonstration of motor unit potential (MUP) characteristics and abnormalities using EMG Simulation software
- Demo of MUP analysis and technical considerations

Target Audience

- Neurologists / clinical neurophysiologists
- Neurophysiologists
- Physiologists
- Neuroscientists
- Neurophysiology technologists

Objectives and Outline

Learning Objectives

1. Develop basic understanding and approach to NCS/EMG
2. Be able to troubleshoot technical artefacts during NCS/EMG
3. Be able to understand normal and abnormal generators of spontaneous EMG activity
4. Be able to understand MUP characteristics and abnormalities using EMG Simulation software
5. Be able to understand principles of EMG recruitment
6. Be able to assess and analyse MUPs on EMG

Medium

- Lecture/Hands-on Demo
- Hands-on Demo
- Lecture/Videos
- Simulation Demo
- Recruitment Trainer software
- Hands-on Demo

Program - Total Workshop Duration : 4 hrs

Session Duration

- 60 mins
- 30 mins
- 60 mins
- 20 mins
- 20 mins
- 50 mins

Topic

- Basic Approach to NCS & Technical Aspects
- Normal and Abnormal Generators of Spontaneous EMG activity
- Motor Unit and MUP characteristics
- MUP abnormalities using EMG Simulation software
- EMG: Recruitment Principles
- EMG: Multi-MUP (Motor Unit Potential) Analysis