

**Results:** prominent observation of the present study is that the frequency of abnormal DL, NCV and Temporal dispersion in Median nerve was more than other nerves. Unequivocal conduction block was more frequent in Peroneal nerve and possible conduction block in Ulnar nerve was more.

**Conclusion:** In electrodiagnostic pattern of CIDP, Median nerve shows more frequent patterns of demyelination Iranian patient.

**Keywords:** Demyelinating polyradiculoneuropathy; Conduction block; Conduction velocity; Temporal dispersion; Distal latency

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**ID 210 – Overlapping respiratory neuromuscular dysfunction in a case of Lambert-Eaton syndrome—M.A. Merino-Ramírez (Hospital Universitario de La Ribera, Clinical Neurophysiology, Alzira, Spain, Universidad CEU-Cardenal Herrera, Department of Biomedical Science, Valencia, Spain)**

**Background:** Respiratory failure is a multifactorial and common complication among patients with small cell lung cancer (SCLC). Phrenic nerve injury secondary to local invasion or diaphragmatic neuromuscular junction (NMJ) disorder associated to Lambert-Eaton Syndrome (LES) may occasionally be involved.

**Objective:** To report a case of diaphragmatic dysfunction secondary to combined phrenic nerve injury and presynaptic NMJ transmission failure in a 50-year-old man with SCLC.

**Methods/Results:** The electrophysiological findings fulfilled the criteria of and P/Q-type VGCC antibodies were highly positive (343 pmol/l). On admission, the phrenic nerve conduction studies disclosed a markedly reduced CMAP amplitude with postactivation facilitation on the right side. The response was absent on the left with profuse spontaneous activity on diaphragmatic needle EMG. Follow-up study reported favorable response to treatment with 3,4-diaminopyridin on the right side. No changes were observed on the left, suggesting a persistent phrenic nerve injury.

**Conclusions:** Respiratory electrophysiological studies are invaluable tools to distinguish between many possible causes of respiratory dysfunction in patients with lung cancer and should be routinely included as part of a diagnostic work up.

**Key message:** Neuromuscular respiratory involvement in patients with SCLC may be overlooked. Abnormally very low diaphragm CMAP amplitudes should arise suspicion for presynaptic NMJ disorder.

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**ID 287 – Sensory feedback generated by intraneural electrical stimulation of peripheral nerves drives cortical reorganization and relieves phantom limb pain: A case study—G. Granata<sup>a,b</sup>, F. Vecchio<sup>a</sup>, F. Miraglia<sup>a</sup>, S. Raspopovic<sup>c</sup>, F. Petrini<sup>c</sup>, S. Micera<sup>a</sup>, P. M. Rossini<sup>a,b</sup> (<sup>a</sup>Brain Connectivity Laboratory, IRCCS San Raffaele Pisana, Rome, Italy, <sup>b</sup>Institute of Neurology, Dept. Geriatrics, Neuroscience & Orthopedics, Catholic University, Policlinic A. Gemelli, Rome, Italy, <sup>c</sup>Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland)**

Phantom limb pain (PLP) is a frequent consequence of amputation and the challenge remains to find a long-lasting treatment. Recent evidence suggests that PLP is likely correlated to aberrant

plastic changes in the cortex. We aimed to counteract these changes through sensory feedback generated by intraneural electrical stimulation and thereby control and alleviate pain. A 34-year-old male with a left hand/forearm amputation had four intraneural electrode arrays implanted in the median and ulnar nerves for 30 days. We developed and tested a prototype system to drive sensory feedback through intraneural electrical stimulation. Functional testing was first carried out to map the type, strength, and location of the sensations generated by electrical stimulation. We then selected specific stimulation sequences that were applied in repeated sessions. The pain perception and cortical neurophysiological maps were measured before and after these sessions. The participant experienced a decrease in the pain perception (rated from 8 to 4–5 at VAS) during and up to a few hours after the stimulation sessions. We also found a change in the somatosensory map of the right cortical hemisphere. Intraneural electrical stimulation was able to reliably generate sensory feedback, modulate cortical organization, and temporarily relieve PLP.

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**ID 347 – Facial myokymia in Devic disease—M.C. Maeztu<sup>a</sup>, R. Villaverde<sup>b</sup>, J. Moreno<sup>a</sup>, J. Cuadrado<sup>a</sup>, R. Lopez-Bernabé<sup>a</sup>, Luis Garcia<sup>a</sup> (<sup>a</sup>Neurophysiology, Hospital General Universitario Reina Sofia y Morales Meseguer, Murcia, Spain, <sup>b</sup>Neurology, Hospital General Universitario Morales Meseguer, Murcia, Spain)**

**Introduction:** Neuromyelitis optica, also known as Devic disease, is one of the inflammatory idiopathic demyelinating diseases of the central nervous system. Involuntary abnormal movements have been described in this disease.

**Patient:** We describe a 49 y/o woman, diagnosed of neuromyelitis optica, with positive immunoglobulin G, NMO Ig G, targeting aquaporin 4 water channel, and presenting for the last five years with involuntary, rippling, wavelike, continuous left facial movements.

**Results:** Needle EMG demonstrated many myokymic discharges in orbicularis oculi y oris muscles on the left. The discharges ranged from doublets to triplets recurring several times per second. Motor units within bursts fired between 25 and 100 Hz.

**Discussion:** The involuntary fine movements of left facial muscles here described, associated with myokimic discharges on the needle EMG, can be the expression of a change in the microenvironment of the axon membrane with a hyperexcitable ectopic generator, caused by demyelination of the root of facial nerve in the brainstem.

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**ID 364 – Repetitive transcranial magnetic stimulation (rTMS) in hypoxic brain injury due to acute carbon monoxide poisoning: Case report—A. Marei<sup>a</sup>, H. Rashed<sup>b</sup>, A. Abdelnasser<sup>b</sup> (<sup>a</sup>Psychiatry, Ain Shams University, Cairo, Egypt, <sup>b</sup>Neurology, Ain Shams University, Cairo, Egypt)**

**Objectives:** In the present case study, we studied the effect of repetitive transcranial magnetic stimulation (rTMS) combined with hyperbaric oxygen therapy (HBOT) in a case of hypoxic brain injury after acute CO poisoning. The main goal of the present study was to evaluate potential long-lasting outcomes of standard rTMS protocols in hypoxic brain insult.

**Case presentation:** A 23 year old female patient has been diagnosed with acute CO poisoning, complicated by ataxia, aphasia and cognitive impairment. Patient received 18 sessions of HBOT, with no significant improvement. Her MRI brain revealed hyperintense signals involving bilateral frontal, parietal, temporal, occipital and cerebellar regions. Patient started to show improvement after receiving 4 sessions of rTMS, patient started to show improvement, regarding her aphasia and ataxia and her follow up MRI brain showed reduced hyperintensities mainly in cerebellar region, bilaterally.

**Discussion:** TMS has been used recently as a tool for therapeutic neuromodulation, which restores the interhemispheric interactions following insult by inhibiting the healthy cortex with frequencies  $\leq 1$ Hz, or by exciting the lesioned cortex with frequencies between 3 and 50 Hz.

**Conclusion:** TMS is a useful non-invasive neuromodulation promising tool to influence the post-lesional motor recovery especially if started within few days of the insult.

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**ID 366 – Cerebral venous thrombosis (CVT) in a female patient with severe obstructive sleep apnea (OSAS): Case presentation—H. Rashed<sup>a</sup>, A. Marei<sup>b</sup>, M. Tork<sup>a</sup>, A. Abdelnasser<sup>a</sup> (<sup>a</sup>Neurology, Ain Shams University, Cairo, Egypt, <sup>b</sup>Psychiatry, Ain Shams University, Cairo, Egypt)**

**Objectives:** Obstructive sleep apnea syndrome is reported to be a risk factor for arterial ischemic stroke, however, relationship between OSAS and cerebral venous thrombosis (CVT) remains uncertain.

**Case presentation:** We present a case of a 38-year-old obese woman, who developed headache, seizures and hemiparesis. Patient was taking combined oral contraceptive pills (OCPs) for 2 weeks prior to this event. Her coagulation profile (including ANA, anti dsDNA, antithrombin III, protein C and S and factor V leiden) was unremarkable. Magnetic resonance imaging (MRI) brain and magnetic resonance venography (MRV) were done and showed CVT. Patient underwent an overnight polysomnogram (PSG) which revealed severe OSAS.

**Conclusion:** In spite of being a risk factor for venous thrombosis, short term consumption of OCPs cannot be considered as the only risk factor for the development of CVT in this patient, especially in the absence of hereditary thrombophilic state. In this obese patient, severe OSAS may be considered as another relevant contributory factor, which, together with the short term OCPs consumption, predisposes the patient to a state of hypercoagulability. Thus, OSAS should be considered as one of the multiple factors causing CVT.

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**ID 407 – Treatment of CIDP with autologous stem cells transplantation – A case report—R. Kotas<sup>a</sup>, S. Vokurka<sup>b</sup>, T. Božovský<sup>a</sup>, V. Matoušek<sup>a</sup>, M. Peterka<sup>a</sup> (<sup>a</sup>Department of Neurology, University Hospital Plzeň, Czech Republic, <sup>b</sup>Department of Hematooncology, University Hospital Plzeň, Czech Republic)**

This case describes a case of a patient with CIDP associated with MGUS. The disease began in 2004 with sensory symptoms – paresthesias in lower and upper limbs (sensory CIDP) which switched into a classic form with flaccid paraparesis or quadriparesis. He was

treated with high doses of prednisone gradually in combination with azathioprine, cyclosporine and mycophenolate mofetyle with very frequent relapses. The therapy was switched to intravenous immunoglobulins with the initial dose 2 g/kg/5 days. Gradually the interval between infusions had to be shortened and the dose increased so that the patient needed the infusions every two weeks. The trial with intravenous cyclophosphamide and then with rituximab was unsuccessfully performed. Finally the autologous stem cells transplantation was performed, The frequency of relapses substantially decreased. The patient needs now the infusions of IVIg at a dose 0.4 g/kg every 5 weeks.

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**ID 408 – Meralgia paresthetica after the fragmentation of a renal stone using ESWL method: A case report—S. Taşdemir, A. Cetiz, M. Yucel, U.H. Ulas (Gülhane Military Medical Academy, Department Of Neurology, Ankara, Turkey)**

Meralgia paresthetica (MP) is the painful mononeuropathy of the lateral femoral cutaneous nerve (LFCN). LFCN originates from the root of the second and third lumbar nerves and innervates the skin on the anterolateral part of the thigh. MP is presented with burning, pain, numbness, tingling on this part of the thigh. Many different reasons are reported in the etiology. The most common reasons are positional mechanical compression, anterior hip surgery, thigh injury, disc herniation and the use of tight corset or tight belt. We reported a case about MP which occurred with a previously undefined reason in the literature. A 35 -year old- male patient presented with burning and pain on the anterolateral part of the right thigh after the fragmentation of a right renal stone using extracorporeal shock wave lithotripsy. The cortical somatosensory evoked potential (SEP) obtained by innervating of LFCN was longer in the right side than the left side. Lumbar MRI and abdominal computed tomography examination were normal. MP was diagnosed as a result of the clinical findings and the examination of the SEP. Drug was not given to patient due to the absence of severe pain. Symptoms were completely healed after 2 month. SEP was normal bilaterally.

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**ID 411 – Diffuse hyperpathia in a case of Wernicke's-like encephalopathy—A. Addis, E. Sechi, A.L. Rassu, R. Piredda, G.P. Sechi (Department of Clinical and Experimental Medicine, University of Sassari, Sassari, Italy)**

**Objective:** Bilateral thalamic lesion is highly suggestive of thiamine deficiency. Thalamic hyperpathia has never been reported as a feature of thiamine-related disorders. We propose a case of Wernicke's-like encephalopathy manifesting as intolerable touch-evoked pain resembling thalamic hyperpathia.

**Methods:** A 22-year-old female was admitted for reduced level of consciousness after four days history of fever complicated with drowsiness and ataxia. A previous evaluation by the EMS had been obstructed by the fact that she felt an intense pain whenever touched, even lightly. Brain-MRI showed T2 hyperintensity of bilateral thalami, heads of caudate nuclei and periaqueductal region. Laboratory investigation excluded infectious-autoimmune etiology. Despite serum levels within normal range, high dose thiamine was