The 9th Summer School of ASNER, The Romanian Society of Electrodiagnostic Neurophysiology

SDV2018, Eforie Nord, Romania
13-14-15 July 2018

Abstract book

Scientific partners:

NEURODIAB
Societatea de Neuropatie Diabetică

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THE SOCIETY FOR THE STUDY OF NEUROPROTECTION AND NEUROPLASTICITY

International Federation of Clinical Neurophysiology

Dear Friends,

It's again July, and that means it is again time for the Summer School in Clinical Neurophysiology. We are now starting this scientific event for the 9th time, so I suppose we are entitled to call it a tradition. Some of you have participated every year, many of you have attended this school a few times, and others are newcomers, but all of us have one thing in common, namely our passion for neurophysiology. We have prepared a scientific program that will contain a plenary session, and, workshops in both EEG, EMG. Again, we have important guests who have accepted our invitation for this event. Also hands-on sessions will be organized, that will give you the possibility to exercise your skills in neurophysiology procedures.

So we are expecting two days of intense scientific activity, in a beautiful environment, and maybe will take a few minutes to enjoy the beautiful beach and the sea, to chat, to make new friends.

Welcome to the 9th Edition of the Summer School in Clinical Neurophysiology !

SDV2018 was awarded 12 CME credits.

Sincerely,

Tudor Lupescu M.D. Ph.D.

ASNER President

contact@asner.org

http://www.asner.org

https://www.facebook.com/asner.org/

Ioana Mindruta, M.D. Ph.D.

ASNER Vice-President

Neurology Department, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

ioanamindruta@me.com

Ionela Codita, M.D. Ph.D.

ASNER Secretary

Neurology Department of Elias University Emergency Hospital, Bucharest, Romania

codion2001@yahoo.com

Ana-Maria Cobzaru, M.D.

ASNER Treasurer

Neurology Department, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

cobzarica@yahoo.com

Mihai Moldovan, MD, PhD

ASNER Scientific director

Copenhagen University, Denmark and "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

moldovan@sund.ku.dk

SDV2018 - PROGRAM

Vineri 13 iulie

12.00 – 13.00 Welcome cocktail și înregistrare

13.00 – 13.15 – Deschiderea SDV ASNER 2018

13.15-16.15 EEG Workshop – Chair Ioana Mindruta

- Anna Kelemen – Metode de activare: somn, HV, SLI si folosirea de electrozi suplimentari
- Mihai Malaia – Montaje uzuale - cand si de ce?
- Anca Arbune – Cât înregistram EEG?
- Irina Popa – Cum interpretam activitatea ictala?
- Andrei Daneasa – Lateralizare si localizare in înregistrările EEG
- Anca Arbune si Andrei Daneasa – Artefacte in EEG

16.15 - 16.30 Coffee Break

16.30 - 19.30 EMG Workshop – Chair Tudor Lupescu

- Mihai Moldovan – Investigarea funcției nervilor periferici prin metode neurofiziologice
- Letiția Badea – Leziunea posttraumatica monitorizare
- Tudor Lupescu – Electrodiagnosticul în neuropatii
- Nicolae Grecu, Ana-Maria Cobzaru – cazuri comentate

Sâmbătă 14 Iulie (1)

8:30 – 10: 45 Sesiune plenara 1 - Chair Tudor Lupescu

- Leon Zăgrean – De la SEMNAL la SEMNIFICAȚIE, în NEUROFIZIOLOGIE
- Tudor Lupescu – Înregistrări EMG Interpretate si comentate
- Mircea Moldovan – Mișcări involuntare generate medular sau in care regiunea medulara are un rol important
- Mihai Moldovan – Studii de excitabilitate nervoasa in polineuropatia diabetica.

10.45 - 11.15 Pauza

Sâmbătă 14 Iulie (2)

11.15 - 12.30 Sesiune plenara 2 – Chair Ioana Mindruta

- Floriana Boghez – Tulburări motorii legate de apneea de somn
- Stefan Ruzinski Dumitrache – Sindromul de rezistenta in căile aeriene superioare, fragmentarea somnului, somnolenta diurna si riscul cardiovascular
- Anca Arbune – Epilepsia, EEG și somnul

12.30 - 13.30 Workshop EEG avansat - epileptologie discutie de cazuri

13.30 - 14.30 Pauza de prânz

14.30 - 15.00 Terapia imunomodulatoare la pacientii cu scleroza multipla in situatii fiziopatologice particulare: sarcina si disfunctie cognitiva. – Simona Petrescu (simpozion organizat cu sprijinul TEVA România)

15:00- 16:20 Sesiune plenara 3 – Chair Mihai Moldovan

- Jean Ciurea – Stimularea magnetica transcraniana in scopul cartografierii ariilor functionale corticale. Aplicatie neurochirurgicala
- Ionela Codita – Monitorizarea neurofiziologica intraoperatorie
- Eugenia Roza – Maturarea ritmurilor cerebrale- de la prematur la adolescent
- Raluca Ioana Teleanu – Utilitatea EEG-ului pediatric- aspecte practice

16:20 – 16:30 Pauza

16:30 – 19:30 Workshop EMG avansat – studii neurofiziologice speciale

Duminică 15 iulie

08.00 - 11.00 Tratamentul spasticitatii membrului superior cu toxina botulinica sub ghidaj ecografic – Marius Popescu

11.00 - 11.30 Pauza

11:30- 13:00 Sesiune plenara 4 – Chair Ionela Codita

- Ionela Codita, Raluca Gurgu – Quiz, prezentări de cazuri
- Martoiu Maria Melania – Amiotrofia focala benigna, prezentare de caz
- Martoiu Maria Melania – Paralizia periodica hipokalemica secundara la un pacient diagnosticat cu hiperaldosteronism primar.
- Marian Fecticu – Atrofia primului interosos dorsal-semn al unei afecțiuni severe sau benigne?
- Dana Feciche - Prezentare de caz
- Nicu Draghici Rolul scalelor clinice in diagnosticul sindromului de tunel carpian la pacienții cu neuropatie diabetica

13.00-13.15 Testare, înmânarea diplomelor de participare, Încheierea Scolii de Vara 2018

Tudor Dimitrie Lupescu

MD, Ph.D.

ltudor64@yahoo.com

Tudor Lupescu obtained his medical degree from "Carol Davila" University of Medicine in Bucharest, in 1989. After 3 years of training at Colentina Clinical Hospital he became Specialist in Neurology in 1994. Since 2006 he is running the Neurology Department al Agrippa Ionescu Hospital in Bucharest. 1998, he qualified as Consultant Neurologist. Since his early years of training in Neurology, Tudor Lupescu has shown a special interest in Clinical Neurophysiology. In 2000 he earned a Competence in Clinical Neurophysiology (EEG, EMG, and Evoked Potentials). 1997 he was the first to use Transcranial Magnetic Stimulation in Romania. This was also the subject of his PhD thesis presented in 2005. Since 2008, Tudor Lupescu is President of ASNER – Romanian Society of Electrodiagnostic Neurophysiology. He is also founding member and vicepresident of the the Romanian Society of Diabetic Neuropathy.

Dr Tudor Lupescu is Fellow of the American Academy of Neurology, and associate member of the American Association of Neuromuscular and Electrodiagnostic Medicine. Between 2008 and 2014 he was also member of the Neurophysiology Subcommittee of ENS, and since 2015, he is member of the Neurophysiology Subcommittee of the European Academy of Neurology.

Ioana Mindruta

Lecturer, MD, PhD

ioanamindruta@me.com

48-year old, neurologist, with competence in electrophysiology and special interest in epileptology, mainly invasive presurgical exploration for epilepsy surgery, neurostimulation and brain connectivity. PhD thesis on "Sleep studies in epileptic syndromes" in 2006.

Current position at the University Emergency Hospital in Bucharest in the Epilepsy and Sleep Monitoring Unit and also hospital coordinator of the National Programs for Pharmacoresistant Epilepsy and Rare Disorders.

Academic affiliation - lecturer in neurology at the University of Medicine and Pharmacy "Carol Davila" of Bucharest.

Vicepresident of Romanian Association for Clinical Electrodiagnosis (ASNER) since 2009.

Spinal generated involuntary movements or spinal as most important site for involuntary movements

Mircea Moldovan (1),

Dr I Codita (2), Dr Patricia Toboc (3), Dr Anamaria Dragomir (4)

Neurology Department of Elias University Emergency Hospital, Bucharest

(1) SUU Elias EMG, (2) Ponderas Medlife (3) Medlife (4) Polimed Targoviste

Involuntary movements are a neurological disorder category wich is difficult to pinpoint in se-miology, diagnosis and treatment. Spinal-generated movements are an entirely separate group. The segmental spinal myoclonus, the propriospinal myoclonus, the cerebral death movements, the aching leg pain syndrome, the involuntary hand are secondary to a known previous lesion. Orthostatic trembling and painful leg and moving toes syndrome with its variants do not have a deciphered etiology Besides these acquired movements, there are also described the congenital mirror movements of the upper limb. Mirror movements are very rare disorders in which unilateral segmental voluntary limb movements are associated with symmetrical segmentary movements on the other side. They are more prone to affect the upper limbs; they appear generally in early childhood and may disappear with motor development or after age 7, though they may persist throughout life. Usually, they are not accompanied by other symptoms and do not affect current activity except under certain conditions. They may also occur in the context of certain degenerative diseases, but with a different evolution. On the occasion of a neurographic examination of a 35-year-old patient for a suspected ulnar neuropathy, mirror-movements of the contralateral hand and fingers were observed. Upper limb neurology was normal The actigus of the fingers moved in the upper limb fingers was recorded both in the left and right hand fingers, without fist movements involvement. The movements were observed since childhood; they did not impede the subject's studies, nor do they affect his current work. No imaging was attempted, and no genetic test was made.

Some hypotheses of generating these movements are the involvement of the rubrospinal tract, the absence of inhibition at the level of the pyramidal tract crossing or the organization of the motor areas and the pyramidal tract outside the normal anatomy.

Mircea Moldovan

MD, PhD

mirceaemg@gmail.com

Dr. Mircea Moldovan, graduate of the “Carol Davila” University Bucharest, Doctor of Medical Sciences, MD is a neurologist at the Hospital “Elias” Bucharest since 1968. Throughout his career, he had a continuous interest for clinical neurophysiology. In the 80s, his main interest was the EEG and evoked potentials under the guidance of Prof Dr V Voiculescu. In the 90s, his interest expanded to the peripheral conduction studies and EMG. During his pioneering work in Romanian clinical neurophysiology, Mircea Moldovan advocated the diagnostic importance of clinical neurophysiology for neurological practice through talks at national scientific meetings and scientific publications. Most importantly, however, through his wealth of practical experience and didactic spirit, he helped initiate in clinical neurophysiology generations of young neurologists. During the last decade, with the transformation of “Elias” hospital neurology into a university department and re-formalizing his skills in EMG (2003) and EEG (2004), Dr. Mircea Moldovan developed his preoccupation for clinical neurophysiology teaching. Together with Dr. Ionela Codita he carries out practical demonstrations of post-graduate courses organized by Professor Dr. Panea EMG. In addition, Dr. Mircea Moldovan contributed to re-launch of the clinical neurophysiology society in Romania as founding member of ASNER 2009.

Intraoperative monitoring of motor pathways-methodology, utility in spine surgery

Ionela Codita

Daniela Godoroja, Andrei Spatariu, Alexandru Thiery, Mihai Sabin Magurean, Mihai Adrian Cristescu

Ponderas Academic Hospital, Bucharest

Ionela Codita

MD

codion2001@yahoo.com

Intraoperative neurophysiology is mainly used for preventing injury of neural tissues and for finding specific elements during surgery.

Motor evoked potentials (MEPs) triggered by electrical cortical stimulation is a technique done successfully under anesthesia, for intraoperative monitoring of the motor pathways. It involves applying an electrical current, either transcranially or directly on the cortical surface, with the purpose of depolarizing the corticospinal system. The transmission of the created electrical volley, through the part of the motor system is assessed by observing the MEPs responses, recorded distal to the level of surgery.

This method allows also identification of the cortical and subcortical regions-motor mapping.

We will present the methodology of MEPs recording and some illustrative cases.

Ionela Codita is currently working as a Senior Neurologist in the Neurology Department of Elias University Emergency Hospital and in the Ponderas Academic Hospital in Bucharest

She earned a Competence in Clinical Neurophysiology in 2005. During her practice, dr. Codita attended many courses and teaching programs in the field of Clinical Neurophysiology such as: scholarship in Neurophysiopathology field at Policlinical Institute of San Donato Milanese, Italy (2002-2004), "Training Course in EMG and Neurography"-Uppsala, Sweden (2009), International SFEMG and QEMG Course–Kobe, Japan (2010), VIREPA distance learning courses on "EEG in the diagnosis and management of epilepsy – Basic Course 6th edition" (September 2011- March 2012) and "EEG SCORE course-1st edition"(November 2012-March 2013), the international educational course "Dinalund Summer School on EEG and Epilepsy" (July 2012) , educational course: "Brainstem and Peripheral Nervous System-Neurophysiological Monitoring"- Groningen, Netherlands (Nov 2016) , educational course organized by International Societhy of Intraoperative Neurophysiology , in Seoul, Korea (Nov 2017) and "Update in Neuromuscular Disorders", London (24-25 May, 2018).

She manifests interest in Peripheral Neuropathies, Motor Neuron Diseases, Myopathies and Intraoperative Neuromonitoring. Dr. Ionela Codita is a member of the Romanian Society of Neurology and she is the Secretary of ASNER-The Romanian Association for Clinical Electrodiagnosis, since 2013.

Nerve excitability testing as a tool to investigate diabetic polyneuropathy.

Mihai Moldovan (1,2)

1) *Copenhagen University DK;*
2) *Carol Davila University, Bucharest, RO*

Conventional nerve conduction studies provide information about the number of conducting axons as well as their conduction velocity along the investigated segment, a surrogate marker of myelination. In contrast, nerve excitability testing asses ion channel function and resting membrane potential at the site of stimulation providing an unique insight into the disease mechanisms.

From the patients's perspective, excitability testing is a simple continuation of conventional studies. The test is commonly performed on the median nerve motor and sensory axons stimulated at wrist. A test takes about 15 minutes and consists of a sequence of measures controlled automatically by a computer: 1) charge-duration, threshold electrotonus, current-threshold and recovery cycle. Results are given as a set of numeric excitability indices derived from the measures. Deviations from control values is interpreted based on a increasing number of literature reports in different pathologies. A mathematical model is available to aid the interpretation.

The presentation will illustrate the use of nerve excitability methods in the investigation of diabetic polyneuropathy. A "hands-on" demonstration will follow on the practical steps leading to recording/analysis of an nerve excitability test and illustrate the interpretation.

Mihai Moldovan

Assoc. Prof., MD, Ph.D.

moldovan@sund.ku.dk

Mihai Moldovan obtained his medical degree from "Carol Davila" University Bucharest in 1999 and PhD degree in neurophysiology from Copenhagen University in 2004 where he continues his academic career.

•2018 Federation of European Neuroscience Societies (FENS) FORUM 2019 Co-Chair.

•2016, 'P.K.Thomas' prize of the European Academy of Neurology.

• Since 2014, elected full member in the European Dana Alliance for the Brain (EDAB).

• Since 2013, serving on general council of Federation of European Neuroscience Societies (FENS) and International Brain Research Organization (IBRO).

• Since 2012, President of the National Neuroscience Society of Romania (SNN), a FENS member.

• 2012-2018, editorial board member for Clinical Neurophysiology, the official scientific journal of the International Federation of Clinical Neurophysiology (IFCN).

• Since 2009, Scientific director of the Romanian society for electrodiagnostic neurophysiology (ASNER), an IFCN member.

• Since 2009, Invited professor and research director associated to the Department of Physiology and Fundamental Neurosciences, "Carol Davila" University of Medicine and Pharmacy, Bucharest Romania;

Leziunea post traumatica - monitorizare

Dr. Letitia Badea

leti_badea@yahoo.com

SC NEURON TEAM SRL Râmnicu Vâlcea

Leziunile traumatice sunt cele mai frecvente cauze de afectare a nervilor. Intrebarile la care poate , de multe ori, sa raspunda o evaluare electroneurografica se refera la topografia si gravitatea leziunii, sediul leziunii si indicatia unei interventii chirurgicale reparatorii de tipul decompresie, sutura, grefa de nerv...

Modificarile electrofiziologice sunt in dinamica - un examen precoce, in primele 7 zile posttauma , permite crearea unei valori de referinta pentru aprecierea ulterioara a gradului de pierdere axonala iar o monitorizare periodica permite o apreciere, cu aproximatie, a momentului unei explorari chirurgicale. O explorare chirurgicala poate fi luata in calcul atunci cand nu exista nici un semn clinic nici electrofiziologic de reinervare in mai putin de o luna de la momentul preconizat a se obtine, dar SOIT DAR NU MAI TARZIU DE SASE LUNI DE LA PRODUCEREA LEZIUNII.

Monitorizarea electrofiziologica postchirurgical pune in evidenta, in cazul aplicarii unei atitudini terapeutice de tip sutura chirurgicala, aparitia potentialului de reinervare inaintea unui raspuns motor obtinut prin stimulare electrica in timp ce raspunsul senzitiv apare ultimul (ramane absent primele 10-12 luni de la sutura). Evolutia modificarilor electrofiziologice postterapie chirurgicala de decompresie incepe perioperator pentru a continua 12-18 luni ulterior.

In concluzie , o monitorizarea a cestor pacienti, este utila atat imediat postraumatic, tardiv posttraumatic dar si postinterventie chirurgicala.

Objective measures of insomnia

Dr. Floriana Boghez

floriana_boghez@yahoo.com

Clinica Academica, Bucuresti

Insomnia is the most common sleep complaint representing a difficulty in falling asleep or staying asleep, when the person has the chance to do so. It can be a symptom or it can be a disease. Acute insomnia is brief and often happens because of life circumstances, but chronic insomnia occurs at least three nights per week and lasts at least three months. It may be a primary sleep disorder or a comorbid status.

The assessment of insomnia follows, in the first line, subjective measures (clinical interview, sleep diary and sleep questionnaires) and in the second line, when a suspicion of another sleep disorders appears, some objective neurophysiologic measures: actigraphy, polysomnography, vigilance tests and electroencephalography. Actigraphy is a long sleep-wake pattern recording (1-2 weeks) highly indicated in circadian sleep disorders, paradoxical insomnia and treatment evaluation. Polysomnography is a complex night sleep monitoring with valuable information about sleep macrostructure and microstructure suitable to exclude a secondary form of insomnia. Polysomnographic parameters as sleep efficiency (SE), sleep onset latency (SOL), total sleep time (TST), number of awakenings (Naw), wake after sleep onset (WASO), slow wave sleep (SWS), arousal index (AI) may objectively proves the subjective complaints of a patient with insomnia. The neurophysiologic tests of insomnia are not routine but for selected patients (by subjective tests) they can be mandatory for an etiologic diagnostic of insomnia.

The role of clinical scales in diagnosis of the carpal tunnel syndrome in diabetic neuropathy patients

Nicu Draghici

IMOGEN Cluj - Napoca, RoNeuro Cluj - Napoca

Nicu Draghici

nicu.draghici@yahoo.com

Este medic specialist neurolog din octombrie 2014 și a absolvit Facultatea de Medicină și Farmacie "Iuliu Hațieganu", Cluj Napoca, în anul 2010. În timpul rezidențiatului, și-a completat pregătirea profesională cu mai multe stagii în Franța, iar in prezent, este doctorand la Facultatea de Medicină și Farmacie "Iuliu Hațieganu". Tema de cercetare aleasă este "Eficiența și inocuitatea stimulării farmacologice a neuroplasticității în neuropatie diabetică". În cadrul aceleiași instituții este membru în Consiliul pentru Studiile Universitare de Doctorat (CSUD).

Este medic specialist neurolog la Institutul RoNeuro si asistent cercetător în cadrul Institutului IMOGEN, proiect derulat de Spitalul Județean de Urgență Cluj Napoca.

Principalele arii de interes sunt studiul și diagnosticul neuropatiilor periferice.

Introduction: Diabetic neuropathy (DN) is one of the most frequent long-term diabetes complications. Carpal tunnel syndrome (CTS) is one of the most common entrapment neuropathy, with a prevalence of 14% in patients without DN and approximately 30% in patients with DN (1). The aim of this study is to evaluate the role of Boston Carpal Tunnel Syndrome Questionnaire symptom severity scale (BCTSQ - sss) in diagnosis of CTS in patients with DN (2).

Materials and methods: We have included in our study 53 patients with Type 2 diabetes mellitus who presented signs and symptoms of a length dependent diabetic neuropathy. All the patients have benefited from nerve conduction studies (NCS) for the upper and lower limbs. We have calculated the sum of both sural sensory nerve action potential (SNAP) and we have divided our patients in 3 groups. In Group I we included the patients with a sural SNAP sum >5 uV, in Group II the patients with a sural SNAP sum between 5 - 15 uV and in Group III the patients with a sural SNAP sum >15uV. Moreover, we have performed NCS for all 106 writs. We have considered "gold standard" for the CTS diagnosis, the distal latency of the median nerve > 4,2 mV and the orthodromic nerve conduction of the median nerve on the wrist-palm segment < 40 ms. The BCTSQ questionnaire was applied bilaterally for each patient and has been positive for 72 hands.

Results: The Area Under the ROC Curve (AUROC) shows an overlap of the neuropathy symptoms with the symptoms of carpal tunnel syndrome. We observed that there is no difference in specificity and sensibility of this questionnaire between the first and the third group.

Discussions: BCTSQ score has similar values between Group I and Group III, which could mean the followings: 1) Paradoxically, there is a similarity between the patients in the first group - who have severe neuropathy and cannot properly feel their symptoms and the patients in the third group without neuropathy, or 2) clinical symptoms of CTS are falsely increased in those with neuropathy because of the severity of the disease…

… Conclusion: BCTSQ may be complementary, but cannot replace the electroneurography in diagnosis of the CTS overlapped with DN.

References:

1. Bruce A. Perkins, David Olaleye, Vera Bril. Carpal Tunnel Syndrome in Patients With Diabetic Polyneuropathy. 2002;25 2. Levine DW, Simmons BP, Koris MJ, Daltroy LH, Hohl GG, Fossel AH, et al. A self-administered questionnaire for the assessment of severity of symptoms and functional status in carpal tunnel syndrome. J Bone Joint Surg Am [Internet]. 1993 Nov [cited 2016 Aug 30];75(11):1585–92. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8245050

How to interpret ictal EEG patterns

Irina Popa

Spitalul Universitar de Urgenta Bucuresti, Bucuresti, Romania

Epileptic seizures are the result of an excessive and abnormal discharge of neurons in well defined regions of the brain that secondarily spread to different other structures. This evolution in time and space can be traced during non-invasive EEG long term monitoring and confirmed by intracranial recordings during presurgical evaluation for drug-resistant epilepsy. Furthermore, certain seizure onset patterns have also been associated with specific types of underlying lesions (e.g.: developmental tumors, focal cortical dysplasia) as well as with intrinsic anatomy and network connectivity in specific brain regions. Finally, ictal EEG patterns could predict seizure outcome in epilepsy surgery.

This workshop will be based on cases explored in our Epilepsy Unit; will involve analyzing ictal EEGs and further integration of clinical and brain imaging information.

Epilepsy, EEG and sleep

Anca Adriana Arbune

Spitalul Universitar de Urgenta Bucuresti, Bucuresti, Romania

There is a tight interaction between sleep and epilepsy and the use of EEG has allowed us to gain some insight into this relationship. Sleep stages have a different modulatory effect on epileptiform discharges and seizures, with specific temporal patterns for different types of epilepsies emerging from recent studies. There are many epileptic syndromes related to sleep which should be known and investigated during sleep for a correct diagnosis. Current standard requirements for EEG recordings need improvement and sleep is mandatory to be recorded for more accurate results.

The maturation of cerebral rhythms – from the premature infant to the adolescent

Eugenia Roza,

Adelina Burlacu, Raluca Ioana Teleanu

Spitalul Clinic de Copii "Dr Victor Gomoiu", UMF "Carol Davila", Bucuresti, Romania

The pediatric electroencephalogram is a test that can bring on a variety of challenges. It is significantly different from the one performed on adults because cerebral rhythms change along with the neuropsychomotor developement of the child. The electroencephalographic trace in children has a greater variability than in the adult, and the interpretation has to be done taking into account the age of the patient.

The presentation aims to show the normal stages of developement of EEG rhythms in children – premature infant<37 weeks, neonate 0-1 month old, infant 1 month- 1 year old, small child 1-3 years old, preschooler 3-6 years old, school child 6-12 years old and adolescent 13-18 years old.

Each age cathegory has its own characteristics and knowing them thoroughly reduces the rate of misinterpretations. The method of performing the EEG has to be adapted to each case too, so that every patient can benefit from a high-quality test. The electroencephalogram has the potential of becoming a biomarker for many neurological pathologies.

The utility of the pediatric EEG – practical aspects

Raluca Ioana Teleanu,

Magdalena Sandu, Diana Anamaria Epure, Daniela Dorina Vasile, Smaranda Antonia Nita, Eugenia Roza

Spitalul Clinic de Copii "Dr Victor Gomoiu", UMF "Carol Davila", Bucuresti, Romania

The electroencephalogram is , apparently, an easy to use test, but one which brings along a lot of challenges when performed in children. It can be done both in a state of wakefulness or sleep (video-EEG, poligraphic monitoring, long-term monitoring, ambulatory EEG monitoring), and must be individualised according to age and clinical aspects.

The presentation aims to show cases that are representative for epileptic manifestations and non-epileptic paroxysmal events. We highlight the importance of performing the electroencephalogram, with its many variants, in order to avoid over-diagnosing epilepsy in children.

Secondary hypokalemic periodic paralysis in a patient diagnosed with primary hyperaldosteronism

Maria Melania Martoiu,

Liviu Popa, Petrescu Simona, Raluca Gurgu, Anca Sarbu, Miruna Popa, Andreea Banica, Cristina Aura Panea

Spitalul Universitar de Urgenta Elias, București, Romania

Introduction: Periodic hypokalemic paralysis is the most common form of periodic paralysis, characterized by repeated episodes of muscular hypotony occurring at irregular periods of time. It may be familial (primary) or secondary associated with pathologies such as thyrotoxicosis, tubular renal acidosis or primary hyperaldosteronism.

In primary hyperaldosteronism, excessive aldosterone secretion is caused by a dysfunction located in the adrenal gland, usually a suprarenal cortical adenoma or rarely a cortical hyperplasia of the adrenal gland. Persistent hyperaldosteronism is commonly associated with hypernatraemia, polyuria and alkalosis, creating conditions favorable for the occurrence of tetanus seizures, but also for those of hypokalemic hypotonia.

Objectives, methods and results: We present the case of a 50-years-old patient, known with high blood pressure, with no treatment, hospitalized in Neurology / Endocrinology Departments of Emergency and University Hospital Elias, for tetraparesis predominaly diparesis, symptoms that occurred about 3 days before the presentation. Biologically, there were severe hypokalemia (K = 1.4 mEq / L), muscle cytolysis syndrome, increased aldosterone / renin ratio (40,3). Native cerebral CT shows no abnormalities, and abdominal-pelvic CT shows bilateral adrenal adenomas. Nerve motor conduction of all examined motor nerves have showed a significant reduction in CMAP amplitude.

Conclusions: The neurological symptomatology of the patient was considered as an occurrence due to the periodic hipokalemic paralysis, secondary to primary hyperaldosteronism, the diagnosis in this case being supported by clinical, paraclinical evaluation – biological, imaging evaluation and by electromyography.

Benign focal amyotrophy – a case report

Maria Melania Martoiu,

Carmen Ragan, Ana Maria Cobzaru, Ionela Codita, Mircea Moldovan, Cristiana Aura Panea

Spitalul Universitar de Urgenta Elias, București, Romania

Introduction: Benign focal amyotrophy is a neurological condition characterized by gradual degeneration or loss of function of an individual or a group of voluntary muscles. It is caused primarily due to progressive degeneration in motor neurons that control the functioning of voluntary muscles. It is clinically characterized by asymmetric muscle atrophy limited to the upper or lower limbs. Objectives, methods and results: A 19-year-old patient has for approximately one year and a half atrophy of the forearm and right hand, associated with muscle loss in the right hand for 6 months and atrophy of the left hand muscles for 3 months. The patient denies sensory symptoms. Neurological examination reveals segmental muscular deficiency on right hand fingers, lack of segmental muscular deficiency on inferior limbs, asymmetric muscle atrophy on bilateral forearm, lack of spontaneous muscle activity, diminished bilaterally brachial tendon reflexes. The initial clinical and imaging examination raised suspicion of bilateral cervical rib syndrome, but the electromyographic examination reveals chronic neurological abnormalities in the bilateral C7-C8 radicular territories without a typical root distribution, without abnormalities compatible with brachial plexopathy, that can demonstrate a cervical rib syndrome with brachial plexus involvement. Although clinically have been revealed only signs of a peripheral motor neuron, the electromyographic aspect has raised the suspicion of a pathology of the motor neuron disease spectrum - a monomielic amyotrophy (benign focal amyotrophy). The cervical spine MRI examination excluded a vertebral and medullary pathology, a cervical spinal cord atrophy or a spinal canal modification. Transcranial magnetic stimulation shows normal central motor activity. In conclusion, a patient with clinical signs of peripheral motor neuron, with motor deficiency that does not respect nerve trunks territories, but root territories, asymmetric and non-homogeneous, with chronic evolution, without sensory phenomena, with electromiographic aspect suggestive of motor neuron disease.

Tratamentul spasticitatii membrului superior cu toxina botulinica sub ghidaj ecografic

Marius Popescu

Spitalul Universitar de Urgenta Elias, București, Romania

Evaluarea clinico-functionala a membrului superior si stabilirea mușchilor țintă spastici de tratat

Metode de evaluare – Scale internaționale de evaluare a funcției pasive si a funcției active

Stabilirea obiectivului tratamentului – indicații terapeutice in diferite patternuri ale spasticitatii membrului superior

Protocol de tratament local: doza per mușchi, diluții recomandate.

Tehnici de ghidaj in administrarea locala de toxina botulinica. Avantaje/dezavantaje ale utilizării ecografiei musculoscheletale in raport cu restul tehnicilor de ghidaj: ES,EMG,repere anatomice

Evaluare ecografica a membrului superior spastic – tehnici de evaluare a mușchilor țintă de injectat/tehnici de injectare locala.

First interosseus atrophy-sign of severe or benign disease?

Marian Cristian Feticu

Sp. Militar De Urgenta "Regina Maria", Brasov, Romania

Atrophy of the first dorsal interosseous is relatively common in neurologic practice most often is caused by the ulnar nerve disorders but it may be a sign of the onset of amyotrophic lateral sclerosis. Other etiologies are uncommon. Thus electrodiagnostic examination of the ulnar nerve has an essential role in diagnosis. Yet classical examination of the ulnar nerve can be not enough if only deep branch of ulnar nerve is affected in Guyon's canal, in which case sensory and superficial branch is usually spared. Although entrapment syndromes affecting nerve fibers are frequently chronic, slowly progressive and demyelinating, in the case I would like to present evolution was acute with early denervation and. and quickly installed muscular atrophy, precipitated by recreational activities-cycling. Opportunity of decompression surgery is one of the challenges that we should respond in such cases.

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