Diagnostic difficulties and therapeutic approach in two cases with familial posterior fossa arachnoid cyst, incidentally disclosed in adulthood

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Quite frequently, neurologists meet patients with cystic brain masses, fortuitously revealed by imagery and generically called “incidentalomas”. Arachnoid cysts (ACs) are classified as primary (developmental) or secondary to trauma, tumour, infection, haemorrhage, neurosurgery. Posterior cranial fossa represents the second most common locations where AC occurs.

The paper describes the unusual situation of a family (mother and her adult descendant) with infratentorial AC, disclosed in adulthood. In the 69-year-old woman, with arterial hypertension and chronic non-valvular atrial fibrillation, the cyst was incidentally revealed by CT imaging. The 40-years-old male related also a long asymptomatic evolution. The cystic malformation was episodically aggravated in the context of a polytrauma (severe head injury with diffuse axonal disruptions, subarachnoid haemorrhage, and coma). He was admitted to rehabilitation accusing cephalalgia and left ataxic hemiparesis. During evolution occurred a transitory visual deterioration, electrophysiologically documented by visual evoked potentials. Serial analysis of CT brain investigations revealed neither hydrocephalus, nor modification of the previous cerebral imagery. Patient refused cystic decompression. Raised intracranial pressure was conservatively managed with dexamethasone, osmotic agents, and acetazolamide. At discharge he had no subjective or objective neurological signs. As a procedural rule, treatment for symptomatic cysts is generally surgical drainage. Conservative observation and “alerted” neurologic follow-up are accepted in most subjects (children or adults) – as well in the two reported cases.

The presentation might be useful for general practitioners and young neurologists, because familial (posterior fossa) arachnoid cysts revealed in adulthood are unusual. Genomic background remained unknown in the reported family.

**Keywords**: familial arachnoid cysts, posterior cerebral fossa, incidentaloma, visual disturbances, tremor, conservative observation

Pathological re-emergence of palmomental & rooting primitive reflexes in a young woman with minimal conscious state and posttraumatic hydrocephalus requiring ventriculoperitoneal shunt, after decompressive craniectomy for traumatic brain injury – case presentation and physiopathological considerations

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A 29-years-old woman was admitted to neurorehabilitation, 6 months after neurosurgical interventions (ventriculoperitoneal shunt for traumatic hydrocephalus, emerged after decompressive craniectomy for severe traumatic brain injury – traffic accident in January 2018).

Neurological examination: minimal conscious status, spastic tetraplegia, severe trismus, swallowing difficulties (nutrition provided through percutaneous endoscopic gastrostomy tube), nistagmus, neurogenic bladder, particular association of re-emerged primitive (exaggerated, not exhausted) facial nerve reflexes: palmomental and a “mitigated” clinical variant of rooting reflex.

The palmomental reflex described by Marinescu and Radovici (1920) consists of a single visible twitch of mentalis muscle on the same side (sometimes contralaterally) elicited by scratching the thenar eminence of the palm. Present in infancy, it disappears as the brain ma-
tures during childhood, and reappears in pathological conditions that disrupt the cortical inhibitory pathways (bilateral supranuclear lesions). The palm-chin reflex is useful in clinical roundsmanship, being a sensitive marker for severe neurological impairments, with limited localising value and no specificity.

**Baby rooting** for milk is a primitive trigemino-facial reflex found in newborn infants, and disappears at about the sixth week of life. Lower lip is lowered; tongue is moved in the direction where the cheek near the corner of the mouth is brushed. The lockjaw has “mitigated” the clinical response. Repeated stimulation induced a repeatable, unilateral mentalis muscle response, similar to the palm-chin reflex.

Chewing remained severely disabled even after botulinum toxin, injected in the left temporalis and bilaterally in the masseter muscles. Poor outcome and neurologic evolution remained stationary after two months of rehabilitative nursing.

**Keywords:** palomental (palm-chin) reflex, rooting archaic reflex, minimal conscious state, posttraumatic hydrocephalus, ventriculoperitoneal shunt, decompressive craniectomy, traumatic brain injury

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**Retrospective of 2018: Notable trends and advances in neurology – treatment and prevention**

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Brief presentation focused on highlighting trends and advances in neurology.

1. **Stroke.** Prevention might be best treatment, management of risk factors and lifestyle changes have a tremendous impact.

   DASH (Dietary Approaches to Stop Hypertension) and the Mediterranean diet based on fruits, vegetables, whole grains, lean proteins, and maximum 100 ml red wine per day where top clinical topics.

   Aspirin (100 mg daily) did not reduce the long-term risk for cardiovascular or cerebrovascular events, and was not effective in primary stroke prevention.

   Rivaroxaban and dabigatran were not superior to aspirin in prevention of recurrent stroke. In cryptogenic stroke in ESUS, rivaroxaban had a higher bleeding risk compared with aspirin, and dabigatran had similar risk.

   FDA approved the first reversal agents for Xa inhibitors (AndexXa).

2. **Parkinson’s disease (PKD).** Analyses of EARLYSTIM study with deep brain stimulation (DBS) showed that DBS improved both the symptoms and depression. Subcutaneous apomorphine was superior to placebo in advanced PKD.

   Human microbiota and the gastrointestinal immune system (the appendix) may play a major role in pathophysiology of PKD.

3. **New treatment options in chronic migraine** prophylaxis included monoclonal antibodies against calcitonin gene-related peptide (CGRP) or its receptor: erenumab, galcanezumab, fremanezumab.

4. **Multiple sclerosis (MS).** First positive trial for siponimod in secondary progressive MS, and first randomized trial in juvenile pediatric MS showed that fingolimod was superior to beta interferon. Smoking is harmful and inhibits the efficacy of immunomodulatory therapy.

5. In **amyotrophic lateral sclerosis (ALS)** negative randomized clinical trials have demonstrated that rasagiline is not superior to riluzole in terms of prognosis.

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**Psychometric properties of Croatian version of the Multiple Sclerosis Intimacy and Sexuality Questionnaire-15 (MSISQ-15)**

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**Introduction/Objectives.** Multiple sclerosis (MS) is a chronic, inflammatory, demyelinating disorder of the central nervous system that results in a wide range of clinical manifestations, including sexual dysfunction (SD). SD in MS patients may result a complex set of conditions and may be associated with multiple anatomic, physiologic, medical and psychological factors. Since MS primarily affects young people, SD secondary to MS may have a great impact on quality of life. The aim of this study was to determine the psychometric properties of Croatian version of the Multiple Sclerosis Intimacy and Sexuality Questionnaire-15.

**Participants/Methods.** In this research was analysed data on 82 MS patients, which included 51 women and 31 man (average 42.6±11.9 years) which underwent neurological care at Clinical Hospital Centre Osijek. The mean score of Expanded Disability Status Scale (EDSS)
was 2.5 (EDSS range 0-8). Our research problem was examined using the Multiple Sclerosis Intimacy and Sexuality Questionnaire-15 (MSISQ-15). MSISQ-15 includes three SD subscales: primary – MS related neurologic changes that may directly affect sexual feelings and/or sexual response; secondary – MS related physical changes that affect the sexual response indirectly; and tertiary – referred to the psychosocial and cultural aspects of MS that affect sexuality. The data was descriptively analysed and Cronbach’s α assessed internal consistency. Pearson r correlations were performed on the three subscales of the MSISQ-15. The level of significance was set to p < 0.05.

**Results.** The means score for MSISQ-15 total scale, primary, secondary and tertiary subscales were 33.23±13.09, 12.01±3.04, 11.18±4.48 and 10.04±5.37, respectively. Cronbach’s α for the MSISQ-15 scale total score using the entire sample was 0.93, indicating high internal consistency. The Cronbach’s α for each of the subscales is as follows: primary, 0.89; secondary, 0.84; and tertiary, 0.92. The primary subscale was moderately correlated with the secondary subscale (r = 0.58). Similarly, the secondary and tertiary subscales were moderately correlated (r = 0.46). The total scale was highly correlated with the primary (r = 0.91), secondary (r = 0.77), and tertiary (r = 0.87) subscales.

**Conclusions.** These results show that the MSISQ-15 subscales have a desirable pattern of correlations and internal consistency. This results suggests that Croatian version of MSISQ-15 can be considered a comprehensive and reliable measure for multiple sclerosis intimacy and sexuality problems in Croatian-speaking MS patients.

**Keywords:** multiple sclerosis, intimacy and sexuality problems, multiple sclerosis intimacy and sexuality questionnaire-15, quality of life

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**Relevance of electroneurography in the assessment of polyneuropathy in Parkinson’s disease**

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**Introduction.** Recently published studies demonstrate an increased prevalence of polyneuropathy (PNP) among Parkinson’s disease (PD) patients. Electrophysiological assessment is the gold standard in the correct diagnosis of neuropathic conditions.

**Objective.** To evaluate the frequency of polyneuropathy using clinical and electrodiagnostic criteria among patients with PD.

**Material and method.** A prospective, descriptive study that included 42 patients with PD, admitted to Neurology Clinic I of Cluj County Emergency Clinical Hospital during 2017-2018. The subjects included were clinically evaluated and undergone routine electroneurographic studies (EDX), in optimal conditions.

**Results.** Following the clinical evaluation, 18 subjects (42.85%) presented changes compatible with a polyneuropatic syndrome, and 11 subjects had subjective complaints (paresthesia). EDX revealed that 50% (21) of subjects had changes compatible with sensory axonal polyneuropathy – 13 patients; axonal sensory and motor neuropathy – 5 patients and demyelinating and axonal sensory and motor neuropathy – 3 subjects. Of the 21 patients without routine EDX modifications, 61.90% (13) showed reduced SNAP amplitude of the superficial peroneal nerve bilaterally.

**Discussions.** These results highlight a neuropathy frequency in the study group higher than in the general population, but similar to the ones published in the previous studies, also underlining the importance of the electrodiagnostic assessment.

**Conclusions.** Extensive electroneurographic evaluation, including superficial peroneal nerve, is useful and superior to clinical evaluation in the correct diagnosis of PD neuropathy.