

normal debit. Delusional thought or hallucinations were not evident. Severe hypoglycemia was first detected by capillary glucose measurement and confirmed by a blood test. After the blood glucose was corrected she became gradually more restless, talkative, disinhibited, with clear humor elation, compatible with a manic state.

**Conclusion** We discuss if this case might be explained by the severe hypoglycemia and its correction, linking it to insulin shock therapy, reviewing this procedure's history, controversies and current developments.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1120

### ECT in major recurrent depressive syndrome with Parkinsonism syndrome

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A 71-year-old woman with history of major recurrent depressive syndrome responsive to clomipramine (last episode at 50-year-old) with the following medical records: ischaemic stroke with progressive cognitive impairment to the extent of requiring wheelchair.

**Current episode** Depressive symptoms, with suicidal thoughts, anxiety, tremor and low food intake in the last month (due to choke phobia) with up to 10 kg of weight loss.

**Diagnosis** Major recurrent depressive syndrome resistant to treatment with Parkinson syndrome.

**Treatment** Lorazepam 10 mg/day levodopa 150/carbidopa 37.5 mg/day, LART Electroconvulsive therapy (Thymatron SYSTEM IV) was also carried out 3 times a week until 15 sessions were reached.

**Discussion** This case illustrates the successful response with LART ECT towards major recurrent depression syndrome associated with a pharmacological parkinsonism maintained over the long-term (one year with ECT). There are sufficient evidences showing that the ECT has an effect in the dopaminergic system at different levels: dopamine release, dopamine neurotransmission and linkage with its receptor, and these effects differ between an acute stimulation and when repeated stimulation is carried out. It must be taken into consideration the fact that concomitant existence of depression and parkinsonism could represent another indication for ECT, since the pharmacological management of these patients is highly complex and could even more if we bear in mind that one of the therapeutic options towards the antidepressant potentiation (atypical anti-psychotics) can worsen the symptomatology.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1121

### Bilateral continuous theta burst stimulation (cTBS) for treatment resistant auditory hallucinations and synesthesia in schizophrenia – A case report

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**Introduction** While 1-Hz repetitive transcranial magnetic stimulation (rTMS) has been found to be effective in reducing auditory

hallucinations (AH), its effects are transient. cTBS, a patterned-rTMS technique induces sustained long-term-depression-like effects. Here, we demonstrate efficacy of twice daily, bilateral-cTBS in a patient with treatment-resistant AH, reflex hallucinations and vision-touch synesthesia.

**Method** A 25-year-old male with 5 years history of treatment-resistant AH (2nd/3rd person), vision-touch synesthesia and reflex hallucinations. He was on a combination of 200 mg clozapine and 300 mg amisulpride for the last 6 months with no improvement. He received two-weeks of twice daily, bilateral-cTBS [40,1 s-trains (bursts of 3-pulses at 50 Hz every 200 ms) given continuously at 90% motor threshold] over the temporoparietal junctions located using the International 10/20 system. Amisulpride was stopped and clozapine was increased to 300 mg/day. Change in AH and synesthesiae were assessed using auditory hallucination rating scale (AHRS) and clinical interview.

**Result** AHRS scores reduced from 35/41 to 0/41 at the end of 2 weeks, with substantial improvement being noticed at the end of the fifth day. Synesthesiae and reflex hallucinations also showed similar trends in improvement. No serious adverse events.

**Discussion** Integration of auditory, visual and tactile perceptions is an important function of the temporoparietal junction. administering cTBS to this region bilaterally reduced our patient's perceptual abnormalities. Increasing dose of clozapine could be a confounding factor, however, the rapidity of treatment response enables us to attribute part of the improvement to cTBS.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1122

### Electroconvulsive therapy management in benzodiazepine-resistant catatonic syndrome: A Case report

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Catatonia is a rare but potentially lethal neuropsychiatric syndrome. Despite its historical association with schizophrenic disorders, it is more frequent in affective ones, and is currently considered an independent pathological entity. The basis of the treatment, regardless of the cause, is the use of benzodiazepines and electroconvulsive therapy (ECT), without a clear consensus on the combined treatment. Regarding ECT, the frequency and number of effective sessions has not been clearly established. Therefore, clinical evolution is the main factor to be considered in order to determinate the appropriate treatment regimen, although the daily application of ECT is preferred, at least for the first week. We report the case of a 41-year-old patient with paranoid schizophrenia, who presented with a benzodiazepine resistant catatonic syndrome. The clinical picture included stupor, mutism, negativism, severe stiffness, catalepsy, waxy flexibility and diaphoresis, with slight CPK increase but with no other extrapyramidal symptoms, fever more than 39 and hemodynamic instability, which allowed to exclude a neuroleptic malignant syndrome. A blood analysis, lumbar puncture, CT, EEG and viral serologies were performed with inconclusive results. The patient required ICU admission and ECT treatment and we used the Bush-Francis Catatonia Rating Scale to evaluate the evolution of symptoms. Six daily treatments with ECT led to an almost full recovery of the patient. Further case series regarding the clinical management of this syndrome are needed, in order to reach consensus on an effective ECT regimen.

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#### EV1123

### Depression and Parkinson's disease: Biological therapies

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**Introduction** Depression occurs in approximately 40% of patients with Parkinson's disease. Parkinson's disease is commonly associated with psychiatric morbidity, which includes depression, anxiety, and dopaminergic psychosis. These compound the patient's predicament. Fortunately, a variety of effective treatments are available.

**Objective** The purpose of this e-poster is to provide an update of the research regarding depression in Parkinson's disease.

**Methods** Describe a case report. A 56-year-old man, with previous diagnosis of Parkinson's disease. We used SSRIs, but they were not enough to successful treatment so we decided to use ECT.

**Results** Our patient failed to respond to medication or develop intolerable medication side effects. Electroconvulsive therapy (ECT) should be considered for this group of patients. Contrary to popular belief, ECT is a widely used and safe treatment for depression when medication fails. ECT has been shown to be effective and safe in PD for treating both depression and dopaminergic psychosis. Several studies also report varying periods of motor improvement following ECT in PD. A study is currently underway at UBC to examine this phenomenon in a controlled setting. ECT improves depression, may permit a reduction in antidepressant medications, and has intrinsic antiparkinsonian properties.

**Conclusions** ECT, has repeatedly been shown to have beneficial effects in PD, but has never gained acceptance as a clinical treatment option. We review the literature on the use of ECT in PD, pointing out that ECT has beneficial effects on both the core motor symptoms of PD as well as the commonly occurring psychiatric co-morbidities.

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#### EV1124

### The role of neuroplasticity in the treatment of cognitive impairments by means multifactor neuro-electrostimulation of the segmental level of the autonomic nervous system

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**Introduction** Cognitive deficit is a consequence of organic lesions of the central nervous system. Activation of neuroplasticity is a way of effective treatment. There is a suppose that the autonomic nervous system (ANS) involves in the regulation of neuroplasticity.

**Objectives** We developed a technology for non-invasive electrical stimulate segmental and suprasedgmental parts of ANS [1].

**Methods** Developed technology is implemented in the "SYMPATHOCOR-01" device. The device produces spatially distributed field of current pulses between two multiple electrodes

located on the neck. The targets of impact are cervical ganglia of the sympathetic trunk and vagus nerve.

**Results** The restoration of blood supply in artificial ischemia calf muscles and recovery of behavior patterns during acute phase of the adjustment disorder were received as a result of application technology in experiments on rats [2]. An increase global neurometabolic activity on SPECT was shown in clinical studies [2]. Application device for two weeks in children with ADHD led to reduction of inattention and hyperactivity symptoms [2].

**Conclusion** We suggest that the demonstrated clinical effects are the results of activate of neuroplasticity by impact on ANS structures. It is necessary to conduct fundamental studies by means of neurovisualization methods (fMRI, PET) for the confirmation action of these mechanisms.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV1125

### Modified electroconvulsive therapy in pseudocholinesterase deficiency: A case report

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**Introduction** Pseudocholinesterase (PCHE) deficiency is an inherited condition, in which recovery from anesthetic agents like succinylcholine and mivacurium is slow and complicated with prolonged paralysis of respiratory muscles in susceptible patients. Succinylcholine is used very frequently as a muscle relaxant during the procedure.

**Objectives** In Bakirkoy research and training hospital for psychiatric and neurological diseases, 24.310 patients were hospitalized for acute conditions and 3490 of these patients were treated with electroconvulsive therapy (ECT) in 3 years. We present a very rare case that we encountered in our practice; a severe PCHE deficiency case that could have complicated the modified ECT procedure unless necessary precautions were taken.

**Aims** Detection of PCHE levels of all patients eligible for ECT is part of our pre-ECT assessments procedure, and the case presented here shows the benefits of this method.

**Methods** The patient is a 29-year-old woman, with a 15 year history of schizophrania. She was hospitalized for homicidal risk and refusal of treatment. Inadequate clinical response with pharmacological interventions and continuous aggressive excitations directed us to consider ECT.

**Results** After the detection of PCHE deficiency (PCHE level: 126 U/L), we performed the modified ECT with propofol and rocuronium instead of succinylcholine as usual. Sugammadex 100 mg was used for fastening the recovery. Response to treatment, which is recorded with positive and negative syndrome scale, was good and we completed 9 ECT sessions without complication.