

Methods: Bibliographic review on Pubmed, Medline and Text-books of Psychiatry

Results: The use of ECT in the psychogeriatric patient has indication in episodes of major depression, mania, schizophrenia and other psychotic disorders, and also when there exists concomitant neurological (affective disorders in dementia, Parkinson's disease, and post stroke depression). or other mental syndromes (catatonia or delirium secondary to various medical conditions).

Because the geriatric population suffers multiple organic comorbidities, the following risk factors require evaluation: history of head trauma, focal or general neurological complaints (recent stroke, intracranial tumour, hypertension or aneurysm), angina, congestive heart failure, bone fractures, osteoporosis, spinal disease and oesophageal reflux.

The following adverse effects have been described: cardiac ischemia, arrhythmia (tachycardia and bradycardia), hypertension, pneumonia secondary to aspiration of gastric contents, musculoskeletal and dental injury, increase of intraocular pressure, post ictal confusion and disorientation, impaired retrograde and anterograde memory.

Conclusion: The indication, risks factors and possible adverse effects of ECT should be carefully evaluated in the elderly patient.

P0322

Absence of cognitive side-effects after ultrabrief electroconvulsive therapy

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Background and Aims: Cognitive side-effects are the most troublesome side-effects after electroconvulsive therapy (ECT). Efforts to reduce side-effects, maintaining a high efficacy are ongoing. Cognitive effects of bifrontal and unilateral ultra-brief pulse ECT were compared, in the treatment of patients with a depressive episode.

Method: Sixty four patients with a depressive episode that was highly medication refractory, and with a high degree of comorbidity completed a course of bifrontal ECT at 1.5 times seizure threshold (ST) or unilateral ECT at 6 times ST, with a pulse width of 0.3 msec by random assignment. An extensive cognitive battery was performed at baseline and at 1 and 6 weeks post-treatment, by a blinded rater.

Results: At the end of the treatment course, 78.1% of patients responded ($\geq 50\%$ decrease HDRS-scores). There was a significant increase in global cognitive function (MMSE), verbal memory (RAVLT), attention (CPT), executive function (WCST) and autobiographical memory (AMI). Patients reported a significant increase of their subjective memory function both during and after the ECT-course. There were no significant differences between the patients given bifrontal ECT and those given unilateral ECT.

Conclusions: Bifrontal and unilateral ultra-brief pulse ECT are effective treatment techniques that do not cause measurable cognitive side-effects or cognitive complaints.

P0323

Electroconvulsive therapy in a state psychiatric hospital in Singapore: Rates of use, indications, and outcome

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Background: Electroconvulsive therapy (ECT) involves the administration of a variable frequency electrical stimulus shock via electrodes applied to the scalp to induce a seizure for therapeutic purposes. In 2001, the American Psychiatric Association (APA) task force on ECT concluded that convincing data exists to support use for major depression, bipolar depression and mania, schizophrenia, and schizoaffective and schizophreniform disorders. However, the National Institute for Clinical Excellence in the UK (NICE 2003) does not recommend that ECT be used as a long-term treatment to prevent recurrence of depressive illness, and that it recommends that ECT should not be used in the general management of schizophrenia.

Aims: To review and describe the practice of ECT in the largest psychiatric hospital in Singapore.

Methodology: This was a retrospective descriptive study performed on all patients who were administered electroconvulsive therapy at the Institute of Mental Health in Singapore during the 2-year study period of 1st July 2005 – 30th June 2007. Data was collected from existing medical records on the demographics, indications, frequency and the complications of the patients given ECT. The frequency of missed fits was also determined as measuring the number of missed-fits provided one way of assessing an ECT clinic's efficiency.

Results: The main indications for electroconvulsive therapy at the Institute of Mental Health in Singapore were patients with Schizophrenia or Schizoaffective Disorders with poor response to medications, followed by patients with mood disorders. The rate of complications of ECT and the frequency of missed-fits were found to be low.

P0324

Differences in brain electrical activity after the cerebellar hemisphere and the vermis rTMS

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Background: The previous studies have detected changes of brain electrical activity after the cerebellar hemisphere rTMS and the vermis rTMS. We supposed that right cerebellar 1Hz rTMS evokes changes in the left frontal cortex. The aim of our study was to determine if 1Hz cerebellar hemisphere and 1 Hz vermis rTMS induces different effect in frontal electrical activity.

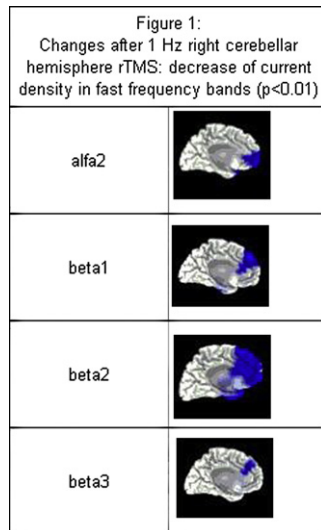
Methods: We used 10 minutes of 1 Hz rTMS (with 600 impulses) in two sessions (first session- application over the right cerebellar hemisphere, second over the vermis). 31-channel EEG was recorded in 5 right-handed healthy volunteers before and after rTMS. The 3D distribution of the current density was revealed by a method of qEEG-Low Resolution Brain Electromagnetic Tomography (LORETA, Pascual-Marqui et al. 1994; 1999).

Results: After 1 Hz right cerebellar hemisphere rTMS the current density decreased in the alfa2, beta1, beta2 and beta3 band over the frontal cortex including medial frontal cortex and the anterior cingulate ($p < 0.01$). After 1 Hz vermis rTMS we found no significant changes.

Conclusions: Our results suggest the possibility to influence the frontal cortical activity by means of the cerebellar hemisphere

rTMS. No significant changes after 1Hz vermis rTMS may suggest either large distance between the rTMS coil and the vermis or our sample is too small to make definitive conclusions.

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P0325

Electroconvulsive therapy in autism: Hope for severe psychopathology

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Aim: This paper reviews electroconvulsive therapy (ECT) in children and adults with autism and concomitant psychopathology, including affective illness, catatonia and self-injury. Case examples are highlighted.

Method: A review of the English-language literature on ECT in pediatric, adult, autistic and mentally retarded populations was conducted, with focus on catatonia, drug-resistant psychiatric illness and self-injury. This was combined with the author's experience with two autistic adolescents in catatonic stupor, and an autistic child and young adult with severe affective disturbance and self-injury. All four patients underwent ECT with excellent symptom resolution.

Results: ECT is an effective and safe treatment modality across the lifespan for a wide range of psychopathology. Current literature supports the appropriateness, safety and efficacy of ECT in autistic and intellectually disabled populations, where patients suffer from an increased incidence of psychiatric and behavioral disturbances. The following cases are presented:

Pt 1: An 18-year-old female with autism, MR and self-injury in classic catatonic stupor.

Pt 2: A 15 year-old male with autism and MR in catatonic stupor confounded by bradycardia and arrhythmias.

Pt 3: A 19-year-old male with autism, MR, profound depression, tics, compulsions and catatonic symptoms accompanied by self-injury.

Pt 4: An 8-year-old boy with autism, MR, cyclical mood disturbance and intractable self-injury confined to full-body protective equipment.

Conclusion: Electroconvulsive therapy affords excellent symptom remission in autistic individuals with affective illnesses and catatonia, which may be complicated by dangerous self-injury. Prompt diagnosis and pursuit of ECT significantly improve clinical outcome in this patient population.

Poster Session II: Lithium and Other Mood Stabilisers

P0326

Lithium nephropathy in Sweden

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Background and Aims: Uncertainty prevailing about the role of lithium for the development of chronic renal failure; and the prevalence of lithium-induced end-stage renal disease (ESRD) being virtually unknown, we decided to clarify these issues.

Methods: Using a questionnaire we counted the number of former or present lithium patients among all ESRD patients on renal replacement therapy (RRT, i.e. dialysis or renal transplant) in two defined regions in Sweden, comprising 30 % of 9 million Swedes. We also counted the number of all lithium patients in the areas. A chart review is under way to retrieve clinical data for the assessment of the nephrotoxic effect of the lithium therapy.

Results: There were 2,270 RRT patients (0.08 % of the general population). Twenty-seven of them (1.2 %) acknowledged long-term lithium treatment. Seventeen were on dialysis, ten were transplanted. The concurrent number of lithium patients was 3,567.

Based on our own earlier studies we estimate that 900 (25 %) of the lithium patients in the two regions had been on lithium ≥ 15 years. Thus, twenty-seven of the long-term lithium patients in this study were subject to RRT.

Conclusions: The prevalence of lithium nephropathy in the RRT population is at least 1 %, 0.8 % in the entire lithium population, and approximately 3 % among long-term lithium patients. The risk of developing ESRD is higher when on lithium therapy compared to the general population. Our results so far underscore the need for adequate safety programs, ascertaining the early detection of lithium nephropathy.

P0327

Efficacy of Quetiapine monotherapy in rapid cycling bipolar disorder compared to Sodium Valproate: A pilot study

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