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Objective To investigate the effect of Qing Huan Ling and (or) risperidone on activity and preferences behavior of the hypoglutamatergic schizophrenia model in mice.
Methods Seventy kunming mice were randomly divided into 5 groups, one group as placebo group. The rest groups intraperitoneal injection MK-801 continuously 14 day, then randomly numbered: model group, Qing Huan Ling group, risperidone groupand Qing Huan Ling combined risperidone group. Intragastric administration give corresponding drugs for each group one month, at the same time observe high activities and changes in the preferences of five groups.
Results Compared with the blank group, activity of the rest model groups induced by MK-801 was increased ($P < 0.05$). After intragastric administration one month, model groups of high activity was decreased, especially risperidone combined Qing Huan Ling group. There was no statistical meaning in inquiry activity of five groups ($P > 0.05$). Compared with model group, latent period of step-through test was prolonged 35.5 s ($P < 0.05$), of step-down test was prolonged 11.4 s in risperidone combined Qing Huan Ling group.
Conclusion The combination of Qing Huan Ling and risperidone can suppress the high activity; also can protect harmed memory of the preference behavior in the hypoglutamatergic schizophrenia model in mice.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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e-Poster Walk: Psychosurgery & stimulation methods (ECT, TMS, VNS, DBS) and psychophysiology

EW0774

Description of anesthetic drugs used in hospital del Mar and their impacts on convulsion duration and blood pressure in electroconvulsive therapy

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Introduction The electroconvulsive therapy (ECT) is an effective treatment used for several psychiatric disorders. However, there are multiple enigmas about the mechanisms of action and factors that improve its results. Some frequent questions are if the anesthetic drug makes a difference in the time of convulsion and blood pressure.
Aims Our principal aim is to describe the utilization of anesthetic drugs among the patients that are being treated with ECT in hospital del Mar. We also want to know the differences in the time of convulsion and systolic arterial pressure for every anesthetic drug (propofol, thiopental and etomidate).
Material and methods We have used the database of ECT in hospital del Mar. It contains information like age, principal diagnosis, medical background and pharmacological treatment at the moment of starting ECTs; it also contains information of each individual ECT session as basal, 2 and 5 minutes arterial pressure; the anesthetic drug used, and convulsion duration.
We made an analysis of general conditions of the population, the differences of convulsion time and arterial pressure between the three anesthetic drugs.
Results Propofol was used in 1140 sessions, thiopental in 61 sessions and etomidate in 54 sessions. The differences in the means of convulsion times between propofol and etomidate are statistically significant ("*P*" value < 0.05). Etomidate or thiopental increases the difference of arterial pressure more than propofol.
Conclusions Further research about the factors that improve convulsion duration and minimize adverse effects on blood pressure is needed.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0775

An evaluation of the use of electroconvulsive therapy in a United Kingdom high secure psychiatric hospital

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Introduction Electroconvulsive therapy (ECT) is an effective NICE-approved treatment for severe depression, treatment-resistant mania and catatonia; the Royal College of Psychiatrists' (RCPsych) guidelines also support its use fourth line for treatment-resistant schizophrenia.
Objectives Evaluate the use of ECT at Broadmoor High Secure psychiatric hospital, focusing on the indications for its prescription and patients' capacity to consent.
Method Analyse case records of all patients who received ECT, and of all patients referred for Second Opinion Appointed Doctor (SOAD) certified ECT treatment under Section 58 of the Mental Health Act 1983 (MHA) due to incapacity, between 01.09.11 and 30.07.15.
Results All patients lacked capacity to consent to treatment during this time. Thirty-three referrals were made to the SOAD service for 15 patients, and of these 30 resulted in certification (T6) of which 10 were not subsequently used. Improvements in mental state and agreement to take clozapine were common reasons for T6s either not being certified or used. Urgent treatment under Section 62 of the MHA was employed 7 times for 4 patients during this period. Of the referrals to the SOAD service, 25 were for treatment-resistant schizophrenia, 5 for mania, 3 for catatonia and none for depression.
Conclusions Those patients requiring ECT within this population tended to be the most unwell and all lacked the capacity to consent to it. The majority (76%) of patients receiving ECT at Broadmoor do so outside of NICE (but within RCPsych) guidelines. ECT may be an effective strategy for promoting compliance with clozapine.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0776

Predictive response factors of repetitive transcranial magnetic stimulation in treatment-resistant depression

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Introduction Repetitive transcranial magnetic stimulation (rTMS) is a neurostimulation technique used in many indications, especially in psychiatry in the treatment of mood disorders. Although its efficacy in this treatment has been demonstrated, the study of predictive response factors currently remains a major challenge.
Method We conducted a retrospective study from the cohort of treatment-resistant depressed patients that received rTMS treatment in Esquirol Hospital in Limoges in order to identify response predictors at three months. Of the 416 patients treated between January 2007 and November 2015, 107 subjects have been included. The clinical characteristics of responders and non-responders at three months after treatment, but also at the end of treatment and after one month were compared. Predictors of clinical improvement objectified by the Hamilton Depression Rating Scale (HDRS) were identified using a logistic regression model.
Results In our cohort, the response rates were 52% at the end of treatment, 61% at 1 month and 57% at 3 months. Psychiatric family history and the recurrence of thymic episodes were found to be negative predictors of response to rTMS treatment. Similarly, high subscore of depression core symptoms in HDRS could also predict a poorer response.
Conclusion Our data from a naturalistic cohort tended to prove that a number of clinical features should be taken into account in determining the profile of the treatment-resistant depressed patients that could respond to rTMS treatment.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0777

Prolonged theta burst stimulation: A novel rTMS paradigm in neuropsychiatry

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Introduction Repetitive transcranial magnetic stimulation (rTMS) has important role in treatment of neuropsychiatric disorders. Theta burst stimulation (TBS), a modification of rTMS, seems to produce greater changes in cortical excitability (CE) than those observed in conventional rTMS protocols. TBS is used in different protocols: intermittent TBS (iTBS) and continuous TBS (cTBS). While iTBS facilitates CE, cTBS leads to CE inhibition. However, a prolonged cTBS produces facilitatory effect similar to that of iTBS. Prolonged TBS (pTBS), a novel rTMS paradigm, is of great clinical interest for its short duration, but also because it may induce stronger effect.
Aim To prove the effect of pTBS of motor cortex on changes of motor threshold (MT), CE and pain threshold (PT) in healthy volunteers (HV). To compare the effects of two different forms of active pTBS (pcTBS, piTBS) with placebo.
Methods A double-blind, placebo-controlled, cross-over study compared the effects of different pTBS of contralateral M1 area on MT, CE and PT. We enrolled 24 HV to the study, who underwent all types of pTBS in randomized order and were assessed before and after each pTBS application. We used MagPro R30 (with coil focused to contralateral M1 area, 1200 pulses/session, 90% MT).
Results A significant changes in CE and MT were found after application of continuous pTBS. Intermittent and placebo pTBS did not confirm the effect. There were no significant changes on PT after pTBS. Continuous pTBS was better tolerated than intermittent pTBS.
Conclusion pTBS should be considered as an effective and safe treatment option for neuropsychiatric disorders.
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EW0778

Transcranial direct current stimulation: Adverse effects and the efficacy of a commonly utilised sham protocol

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Introduction Transcranial direct current stimulation (tDCS) is a promising neuromodulation method that has, for example, been used to treat depression. Nevertheless, the adverse effects of tDCS and the validity of the current standard tDCS sham protocols have received limited attention.
Objectives To evaluate the extent and types of tDCS adverse effects and to assess the reliability of sham stimulation as a control procedure for tDCS in a double-blind setting.
Aims To compare adverse effects between tDCS and sham stimulation groups, and to determine how well the participants and the experimenter are able to distinguish tDCS from sham stimulation.
Methods A sample of healthy volunteers received a 20-minute session of either tDCS ($n = 41$; 2 mA) or sham stimulation ($n = 41$; ramp up 15 s, ramp down 15 s; no current in between). The anode was placed over F3 and cathode over F4. Both the participants and the experimenter reported immediate adverse effects and the perceived likelihood for the participant to receive tDCS. Analyses were conducted using the Mann–Whitney U-test.
Results The tDCS group reported more erythema compared with the sham group ($P = 0.016$, Cohen's D = 0.444). No other significant differences in adverse effects were observed. In the tDCS group, both the participants ($P = 0.034$, Cohen's D = 0.612) and the experimenter ($P = 0.006$, Cohen's D = 0.674) reported a higher perceived likelihood of the participant receiving tDCS than in the sham group.
Conclusions tDCS has only modest adverse effects. Nevertheless, the current standard sham protocol appears insufficient.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0779

From theory to practice: The contribution of John Farquhar Fulton (1899–1960) to psychosurgery

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