

At the same time new intrahemispheric links in men under Resistance stage development are formed mainly in the right frontal region (alpha1,2,3-subbands).

**Conclusions:** Connectivity patterns displayed gender-related variations that are associated with the difference in the alterations in the attention focusing, working memory, and emotional processes under burnout formation.

**Disclosure:** No significant relationships.

**Keywords:** functional connectivity; gender; emotional burnout; Resistance stage

## EPP0553

### Is repetitive Transcranial Magnetic Stimulation really effective in the treatment of major depression? – Results of a Meta-Analysis

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**Introduction:** Clinical studies demonstrated the efficacy of rTMS treatment in major depressive disorder. However, the results of meta-analyses are contradictory due to the heterogeneity of the included studies.

**Objectives:** The aim was to analyse the effectiveness of rTMS for treatment-resistant major depression.

**Methods:** A systematic literature review of English-language articles published in the last 10 years was performed on PubMed and Scopus databases according to PRISMA guideline principles. To assess the effects of rTMS on response and remission rates, random-effects model and inverse variance method were used.

**Results:** 23 randomized double-blind sham-controlled studies met the inclusion criteria for quantitative analysis for response (n= 1020 patients) and 12 studies for remission (n= 846 patients). The relative risk for response and remission were 2.19 (95% CI: 1.68-2,86, p=0.000 n=912) and 2.65 (95% CI: 1.32-5,31, p=0.002, n=603), respectively using rTMS as add on treatment (in patients after two antidepressant treatment failures) compared to standard pharmacotherapy. I<sup>2</sup> analysis showed no considerable heterogeneity in the combined effect sizes neither for remission studies (I<sup>2</sup>=23.36%) nor for response studies (I<sup>2</sup>=0.00%).

**Conclusions:** Transcranial magnetic stimulation became an evidence-based, effective treatment for treatment-resistant major depressive disorder, either as a monotherapy or as an augmentation of pharmacotherapy. However, because of the lack of standardized protocol, a substantial methodological heterogeneity exists. According to our results, rTMS was significantly more effective than sham rTMS in both response and remission outcomes, which is consistent with previous meta-analyses, but the effect size was a bit smaller than what was reported previously.

**Disclosure:** No significant relationships.

**Keywords:** rTMS; Depression; metaanalysis

## EPP0555

### A review of brain stimulation and neuromodulation therapies as a treatment of depression as a behavioural and psychological symptom of vascular dementia

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**Introduction:** Vascular dementia (VaD) accounts for approximately 15% of all cases of dementia. While there are many different definitions of vascular dementia, it is generally understood to refer to “disease with a cognitive impairment resulting from cerebrovascular disease and ischaemic or haemorrhagic brain injury”.

Research suggests that 30% of patients with VaD also suffer from depression. The treatment of depression in VaD with pharmacological therapy is relatively well-established, with the first line drug being a selective serotonin reuptake inhibitor (SSRI). However, a relatively under-researched area is the use of brain stimulation and neuromodulation therapies for the treatment of depression in VaD.

**Objectives:** This review aims to provide a critical analysis on the efficacy and safety of brain stimulation therapies in treating depression in VaD to determine whether it is an appropriate treatment option.

**Methods:** The databases used were PubMed and WebofScience. The available literature was analysed which resulted in three papers which met the inclusion criteria and were critically appraised.

**Results:** In all three studies, depressive symptoms improved after ECT was administered, regardless of the specific tool used to measure the severity of depression. The side effects experienced were also only temporary and resolved independently which speaks to the safety of ECT as a treatment option.

**Conclusions:** The results of the study prove that ECT is a safe and effective option in treating depression in VaD. However, more research is needed for the medical community to fully understand the different treatment options and say with certainty which is the safest and most effective.

**Disclosure:** No significant relationships.

**Keywords:** vascular dementia; Depression; ECT; brain stimulation therapies

## EPP0557

### Electroconvulsive Therapy’s use in Idiopathic Intracranial Hypertension with Mood Disorder: caution, promise, and progress

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**Introduction:** Idiopathic Intracranial Hypertension (IIH) is a condition characterized by an increase of intracranial pressure (ICP) with no identifiable cause to date. One-half of patients who suffer from IIH have co-morbid mood disorders, such as Major Depressive Disorder (MDD), that can be refractory to pharmacologic treatment.