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Non-invasive neurostimulation in OCD – implications for widescale application.

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Abstract: Brain-imaging findings implicate aberrant cortico-striatal neurocircuitry in the underlying pathology of OCD, so representing a potential treatment target. Ablative neurosurgery or deep brain (invasive) stimulation (DBS) of tracts or nodes within this circuitry is sometimes found to improve OCD, possibly by enhancing information-processing functions. Non-invasive neurostimulation, targeting superficial cortical nodes within cortico-striatal circuitry, is a safer and more acceptable alternative, with potential for scaling up and applying to a larger patient population, earlier in the course of illness.

Repetitive transcranial magnetic stimulation (rTMS) is the form of neuromodulation studied most in OCD. The orbitofrontal cortex (OFC), dorsolateral prefrontal cortex and supplementary motor area (SMA) have been identified as promising targets. The effect is larger for those not resistant to SSRI or failing to respond to only one SSRI trial. Thus, r-TMS may be best implemented earlier in the care pathway. rTMS is also relatively costly, involves specialist technical equipment and staff, and cannot be delivered in patients' homes.

Transcranial direct current stimulation (tDCS) involves applying a low-amplitude (1-3mA) electric current to the brain via electrodes placed on the scalp. Compared with rTMS, tDCS tends to electrically modulate a more diffuse and superficial brain area, but it could represent a preferable option for patients with common mental disorders such as OCD, as it is cheaper, portable, simple and safe to use. In a recent randomised controlled feasibility study, the L-OFC represented the optimal target based on clinical changes. Further investigation of tDCS in OCD is warranted, to determine the optimal stimulation protocol, longer-term effectiveness and brain-based mechanisms of effect. If efficacy is substantiated, home-based approaches represent a rational next step.

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Influence of COVID-19 lockdowns on patterns of coercive measures in Austria

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Abstract: Background and Aim: Coercive measures (CMs), such as involuntary psychiatric admission and mechanical restraint, are considered a last resort in the treatment of people with psychiatric disorders. Although numerous factors influencing its use have been identified, the impact of a pandemic and in particular restrictions like lockdowns on CMs are still unclear. Thus the aim of the present retrospective study was to examine the effects of the COVID-19 pandemic, especially the lockdowns, on CMs in Austria.

Method: This retrospective exploratory study assessed all CMs in Austria, except for the federal state of Vorarlberg, between 01.01.2018 and 31.12.2020. Descriptive statistics and regression models were performed.

Results: During the three-year study period, 40,012 individuals (45.9% females, mean age 51.3 years) had 66,124 involuntary psychiatric admissions for an average of 10.9 days and restraint in 33.9%. In periods of COVID-19 lockdowns (2020 vs. 2018/2019), CMs in form of involuntary admissions were significantly fewer (OR:0.93, $p=0.0001$) but longer (11.6 (SD:16) vs. 10.9 (SD:15.8) days). The likelihood of involuntary admission during lockdowns was only associated with year (2020 vs. 2018/19, $p=0.0002$), but not with sex ($p=0.814$), age ($p=0.310$), use of mechanical restraint ($p=0.653$) or type of ward ($p=0.843$).

Conclusions:

Restrictions such as lockdowns are affecting CMs and have resulted in fewer but longer involuntary psychiatric admissions during weeks of lockdown in Austria. The result strengthens previous knowledge that showed the dependence on external factors when using CMs, but requires further clarification with regard to the causality and the association with outcomes that are intended to be prevented, such as suicides.

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Efficacy and safety of deep brain stimulation in OCD

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Abstract: Deep brain stimulation has become a last resource procedure for severe, chronic and refractory OCD. However, the procedure is highly invasive and its efficacy must be balanced against the risks it may entail. In addition, there are a number of procedure-related issues that may influence the efficacy of DBS, such as the target of stimulation, the stimulation parameters to be selected, the presence of comorbidities as exclusion criteria, or the