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**TRANSCRANIAL DIRECT CURRENT STIMULATION (tDCS) IN A PATIENT WITH CORPUS CALLOSUM APLASIA AND ORGANIC CATATONIA – A CASE REPORT**

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### Introduction

Transcranial direct current stimulation (tDCS) is currently discussed as a therapeutic intervention in various psychiatric disorders. Based on the report about the effectiveness of tDCS in a patient with catatonic schizophrenia, we applied bilateral prefrontal tDCS in a patient with corpus callosum aplasia (CCA) and severe catatonia instead of maintenance electroconvulsive therapy (ECT).

### Aim

To investigate whether tDCS can replace ECT in a largely treatment-resistant patient.

### Design

The 41 year-old male patient showed severe catatonic symptoms since adolescence and was treated by weekly ECT for almost 6 years. Due to cardiac complications and increasing cognitive deficits caused by long-term ECT and weekly anesthesia, tDCS was suggested. The anode was positioned over the left dorsolateral prefrontal cortex (DLPFC), the cathode over the right DLPFC. 2mA tDCS was delivered for 2x 20 minutes (90 minutes break in between), three times a week for the first two weeks, thereafter once to twice weekly. Concomitant medication (clozapine 600mg/d, aripiprazole 10mg/d, pirenzepine 50mg/d, lorazepam 3mg/d) was continued.

### Results

So far, more than 20 double sessions of tDCS were applied. ECT was needed once after a period of hospitalisation for 10 days due to pneumonia. Since then the patient has solely received tDCS for more than 13 weeks. Catatonic symptoms resolved further under tDCS compared to ECT (Bush-Francis Catatonia Rating Scale: 27/69 points during ECT, 5/69 during tDCS).

### Conclusion

tDCS in combination with neuroleptic treatment could be an alternative to ECT in organic catatonia. Further studies are needed to support our hypothesis.