stimulation on this basis for 20 sessions. The Brainstem auditory evoked potential (BAEP), the Upper sense evoked potential (USEP), the nerve electrophysiology evaluate electroencephalogram (EEG) and the Glasgow coma scale (GCS) or PVS rating scale were used to test both groups before and after the treatment.

Results Before treatment, the two groups of patients were compared with BAEP, USEP, EEG, GCS or PVS scores, and the difference was not statistically significant ($P > 0.05$). After treatment, BAEP, USEP, EEG, GCS or PVS scores were compared with those in the group before treatment, and the difference was statistically significant ($P < 0.05$). And the observation group's BAEP, USEP, EEG, GCS or PVS scores were better than the control group ($P < 0.05$).

Conclusion On the basis of conventional rehabilitation therapy, tDCS treatment can further improve the patients' consciousness disorder, and this combination therapy is worthy of clinical promotion and application.

Disclosure of interest The author declares that he has no competing interest.

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Voluntary postural or dual-task training improves motor and mental functions in patients with traumatic brain injury

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Introduction/Background Traumatic brain injury (TBI) is the most common cause of social disadaptation among young people and accompanied by disorders in motor and cognitive spheres. The aim of our study was to estimate a rehabilitation effect of voluntary postural and dual-task training at different periods after TBI.

Material and method Seventeen TBI patients (28 ± 5.3) and 32 healthy persons (27.6 ± 0.07) participated at the investigation. Electroencephalographic (EEG), stabilographic studies and clinical scales (MMPI, FIM, MMSE, Berg's scale) were utilized for estimation of different spheres of human functioning.

Results Clinical scales demonstrated deficits in all domains including motor and cognitive activity at the early terms after TBI. These deficits accompanied by global decrease of EEG connectivity between brain areas especially for distant brain areas while the increase of connectivity for local networks was observed as a reflection of compensator brain mechanisms. Postural training focused at vertical pose recovery while demonstrated improvement of motor as well as mental functions and accompanied by an increase of EEG connectivity. Dual-tasking was used as next step of rehabilitation course. EEG data demonstrated additional increase of EEG connectivity between different brain areas. Clinical scales showed improvement of all functions and improvement the quality of patient's life and their social adaptation.

Conclusion Thus, voluntary postural and dual-task training may be used as effective rehabilitation approach that can serve as trigger for brain functional integration resulting in recovery of disordered functions. This approach may be recommended for patients with functional deficits to enhance their social adaptation and quality of life.

Keywords Postural control; Cognitions; Dual-tasking

Disclosure of interest The authors declare that they have no competing interest.

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"Excessive complaints" more than one year after a mild traumatic brain injury (mTBI): Hysterical psychic functioning or not?

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Introduction/Background A wide range of cognitive, emotional and somatic symptoms are frequently reported after mild Traumatic Brain Injury (mTBI) and usually disappear in a few months. However a "miserable minority" keeps looking for medical attention more than one year post mTBI. Their complaints are often considered excessive, histrionic and unfounded. Here we present a prospective study to assess neuropsychological disorders and intrapsychic functioning in such patients.

Material and method Twenty-three adults (6 men, 17 women), mean age 48, sought care at our consultation about 41 months after mTBI. They all had a neurological, neuropsychological, psychological (projective tests: Rorschach and TAT) and psychiatric assessments (Minnesota Multiphasic Personality Inventory: MMPI). Projective tests are known to bring to light intrapsychic functioning in terms of narcissistic and objectal relationships while MMPI assesses personality traits and psychiatric symptomatology.

Results While 21 patients were socially well-integrated pre-mTBI, only 6 were back to effective work at the time of assessments. The neuropsychological assessment showed cognitive impairments, from moderate to severe, notably in attention (87%), working memory (74%), long-term memory (65%) and psycholinguistic abilities (74%). Some patients (38%) also presented discrete visuo-spatial impairments. Patients talkatively told their mTBI story in a tragic, histrionic style, with impressive suffering feelings. The MMPI pointed out a non-significant value of malingering (5%) and a significant high value of hysteria (73%) and somatisation (45%) scales. Surprisingly projective tests never highlighted an hysterical psychic functioning but exhibited signs of narcissistic fragility.

Conclusion Despite of the histrionic style of excessive expression of emotion, dramatization, attention seeking and physical symptoms, the projective tests were not in favour of a hysterical psychic functioning. The specific role of the traumatizing context of mTBI in conjunction with psychic specificities, notably self-image and aggressivity drive are discussed.

Keywords MTBI; Cognitive disorders; Psychic functioning

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