LETTER TO THE EDITOR

Transcranial Magnetic Stimulation in Autism

The Editor,

Sir,

Non-invasive techniques, such as transcranial magnetic stimulation (TMS), have recently been used to reduce symptoms of autism. Deep TMS has been tested in some treatment-resistant cases (1). In some cases where TMS was applied to patients with autism and Asperger syndrome, it was found that TMS improves motor function by improving the cortical inhibition (repetitive behaviours) through the GABAergic system (2). One study shows that the results obtained by applying TMS to the autism primary motor cortex during action in the modulation of corticospinal excitability may be associated with social functioning as intended (3). In this article, a case of an autistic patient treated with TMS is mentioned.

An 18-year-old male patient came to NP Brain Hospital, Istanbul, Turkey with a tendency to violence, a lack of perception and behaviour disorder. According to his psychiatric history, he suffered from speech delay and an indifferent attitude when he was 3 years old. When he was 3.5 years old, he was diagnosed with autism, according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Last year, his aggressive behaviours were increased. He was prescribed risperidone (4.5 mg/day) and fluoxetine (20 mg/day). However, his family claims that his symptoms were not decreased. After 11 months, he came to our clinic again. He was prescribed aripiprazole (20 mg/day) and zuclopentixol (50 mg/day).

In addition, he was given repetitive TMS (rTMS)—the Magstim brand—to the left dorsolateral prefrontal cortex (25 Hz, 2-second train duration, 19-second intertrain interval) for 10 minutes (1000 pulses per session) using a butterfly coil, one session per day, for 20 days. Hand reflexes were determined as 50 power and the threshold of motor power was determined as 60 power. After the treatment, his aggressive behaviours were decreased. His family also claimed that his interpersonal communication and compliant behaviour were increased. The positive and negative syndrome scale was decreased from 59 points to 48. In the follow-up examination, he was willing to talk. According to his family, his social improvement was increased and irritability was decreased. He was able to answer questions. He was willing to communicate with others and he started to remember previous events better. His family had not witnessed these changes before.

Baruth and his colleagues noted neurophysiological changes in clinical subjects during rTMS (4). They noted, especially, the electrophysiological effects of low-frequency rTMS on 25 subjects with autism spectrum disorder (age 9–26 years) and in the 20-year-old control group. After the application of 12 sessions of bilateral rTMS, the pattern of repetitive and restrictive behaviour was decreased. There was a significant change in irritability (4). Although Enticott *et al* also stated that one of his patients was treated with deep rTMS using a HAUT-coil (5), and we applied deep rTMS using a butterfly coil, this case is promising for future developments.

Keywords: Autism, transcranial magnetic stimulation

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