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Neuromodulation of Scalp Electroacupuncture in the Treatment of Autism Spectrum Disorder

Background

Autism spectrum disorders (ASD) are a series of neurodevelopmental disorders characterized by social disorders, rigid behaviors and narrow interests. The World Health Organization (WHO) estimates that the prevalence of ASD has been increasing over the past 50 years. With one in 48 children, ASD has become a global public health problem. Currently, there is no effective drug treatment for children with ASD, and there is no effective medical treatment. Education of these ASD children by special education methods alone has a poor outcome, with 75% of ASD children failing to achieve normal or cure. And 80% of ASD children suffer from mental retardation, ADHD, epilepsy, emotional sleep disorders and so on. It can cause pain and suffering for ASD children and their parents. The effects may persist into adulthood.

Objective

The purpose of this study was to investigate the effect of scalp acupuncture of painless therapy on core symptoms, quality of life and communication ability of children with ASD. Our team conducted a controlled study of scalp acupuncture therapy in 198 children diagnosed with ASD. The clinical diagnostic criteria of children with ASD who were selected for met the DSM-5 criteria. Each child and parent signed an informed consent form.

Methods

198 children with ASD were randomly divided into two groups. One group 89 cases received painless scalp electroacupuncture therapy and the other group 89 cases received Pediatrics rehabilitation care and special education for 6 months. Clinical evaluation methods were ATEC, ABC, CARS and Gesell developmental scales. Pre - and post-treatment assessments were performed. The age of the two groups was 3-7 years old, and the gender, degree of illness, comorbidities, family education and rearing methods, course of disease and other factors were statistically analyzed. There was no significant difference between the two groups, and there was a certain comparability between the two groups. Painless scalp electroacupuncture therapy method, acupuncture and precise scalp surface projection in functional language area of cerebral cortex were selected for scalp acupuncture. Broca and Wennicken area were simultaneously stimulated by acupuncture. Painless scalp acupuncture is performed every other day. After Painless scalp acupuncture acupuncture, electrical acupuncture was given to stimulate the language area for 15 minutes, every 10 times of acupuncture, rest for 15 days. A second clinical evaluation was conducted 6 months after painless scalp acupuncture.

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Results

The improvement of core symptoms in the painless scalp electroacupuncture treatment group was better than that in the control group. The initial clinical improvement was in abnormal visual communication, improvement of sleep and mood, and the following clinical effects were alleviation of rigid behavior, improvement of attention, and improvement of verbal and social communication ability. Assessment of these scales reflects a gradual improvement in these core symptoms. But these changes were not significant in the control group.

Conclusion

The research results showed that painless scalp acupuncture therapy could significantly improve the core symptoms of ASD children, such as extreme loneliness, eye contact disorder, language repetition, compulsive agreement, and indifference, significantly regulate the abnormal EEG of ASD children, and positively promote the cognitive level of low-functioning ASD children. The clinical efficacy of the treatment of ASD was not closely related to age. Painless scalp electroacupuncture can be used as an effective supplement and alternative medicine therapy in the clinical treatment of ASD. The popularization and application of painless scalp acupuncture therapy can improve the quality of life of ASD children and reduce the economic burden of society and family.

Since 2004, Nanhai Women's and Children's Hospital Affiliated to Guangzhou University of Chinese Medicine has applied our original pediatric neurorehabilitation scalp acupuncture therapy to treat ASD and achieved good clinical efficacy. In order to further promote the application, our research group obtained the exact clinical effect confirmed by scientific evaluation through the clinical validation study and clinical follow-up of 1000 cases of ASD. We also receive pediatricians from all over the world who come to our hospital in China to study head acupuncture therapy for ASD. Doctors and rehabilitation therapists from Switzerland, Australia, the United States, Germany, Egypt, Russia, Kazakhstan and other countries have come to our hospital to study the clinical application of head acupuncture therapy in ASD.

Keywords: Autism spectrum disorder; Electroacupuncture; Scalp;Painless

Biography

Zhenhuan LIU professor of pediatrics, Pediatric acupuncturist Ph.D.tutor. He has been engaged in pediatric clinical and child rehabilitation for 40 years. Led the rehabilitation team to treat more than 40,000 cases of children with intellectual disability, cerebral palsy and autism from China and more than 20 countries, More than 26800 childrens deformity returned to school and society and became self-sufficient. The rehabilitation effect ranks the international advanced level.Vice-chairman of Rehabilitation professional committe children with cerebral palsy, World Federation of Chinese Medicine Societies. Visiting Profassor of Chinese University of Hong Kong in recent 10 years.He is most famous pediatric neurological and rehabilitation specialists in integrated traditional Chinese and Western medicine in China. He has edited 20 books. He has published 300 papers in international and Chinese medical journals.