



Clinical Study on Acupuncture Therapy of Gredging Governor Vessel for Awakening Mentality in Premature Infant with White Matter Damage

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Keywords

Premature infant, White matter damage, Gredging governor vessel for awakening mentality effect

Background

With the development of perinatology and neonatal intensive care technology, the success rate of treatment of premature infants in China was significantly increased. However, these factors due to perinatal white matter damage caused by children also increased.

White matter damage (WMD) is one of the most common forms of brain injury in premature infants. It is also a major cause of chronic neurological complications [1]. WMD caused by the incidence of cerebral palsy is about 10%, and cognitive disorders, behavioral abnormalities such as the incidence of up to 50% [2], and may be associated with audio-visual disorders, so the white matter damage has received increasing attention. At present there is no specific treatment for premature infant white matter damage. The aim of this study is to study the clinical trials in a randomized controlled trial, based on conventional rehabilitation on the basis of acupuncture therapy of dredging governor vessel for awakening mentality, neurological assessment through the brain imaging and electrophysiology and other aspects of the check to see whether the difference in efficacy. To investigate the therapeutic effect and possible mechanism of acupuncture therapy on the white

matter damage in premature infants.

Objective

In this study, randomized controlled clinical trials to select the white matter damage in preterm infants, in the conventional basis of rehabilitation, based on the increase acupuncture therapy of dredging governor vessel for awakening mentality, comparative analysis of neural motor development and head imaging changes, To understand the effect of acupuncture treatment on the white matter damage in premature infants, and to find a more effective treatment for preterm infants with white matter damage.

Methods

The infants with gestational age of less than 35 weeks and a history of white matter damage and age of 3 months to 12 months were randomly divided into acupuncture group and control group. The subjects were included in the routine basic rehabilitation therapy, on the basis of acupuncture group increased by the acupuncture therapy of dredging governor vessel for awakening mentality. At the beginning and the end of the study, the subjects were examined by head MRI and Diffusion Tensor Imaging (DTI).

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The Gesell developmental diagnostic scale to understand the neural motor development. To observe the effect of acupuncture on the nerves and nerves of the passers-by, to observe the effect of neuro-imaging function and intelligence of preterm infants with white matter damage, and to study the repair effect of acupuncture on premature infants with white matter damage.

Results

1. There was no significant difference between the two groups after treatment ($P>0.05$). The FA value between thalamus and frontal lobe of the two groups was statistically significant ($P<0.05$). The FA value between thalamus and frontal lobe of acupuncture group was statistically significant ($P<0.05$). Compared with the control group, the scores of hyperactivity, fine exercise and social adaptation DQ in the Gesell scale of the acupuncture group were significantly increased ($P<0.05$).
2. There was a significant correlation between birth weight, birth gestational age and age of acupuncture group, social adaptation of acupuncture group, DQ difference of large

movement and fine action. There was a significant correlation between the head circumference and the social adaptation, large movement of the acupuncture group ($P<0.05$).

Conclusion

In this study, the white matter damage of the premature infants through the use of acupuncture therapy of dredging governor vessel for awakening mentality with conventional rehabilitation treatment of its neurological development and improvement of the situation and head imaging changes were observed and analyzed, the results show that: acupuncture therapy of dredging governor vessel for awakening mentality on the white matter damage in premature children infants have a good effect, the acupuncture therapy through the acupoints to stimulate and clear the governor vessel, and by the various levels of neuromodulation and integration, excitement of the activation of the brain, awakening resuscitation, promoting the repair of premature infants with impaired white matter function, improve the ability of large sports, the fine movement, and social adaptability.

References

1. Back SA, Rosenberg PA. Pathophysiology

of glia in perinatal white matter injury. *Glia* 62(11), 1790-1815 (2014).

2. Volpe JJ. Cerebral White Matter Injury of the Premature Infant More Common Than You Think. *Pediatrics* 112(1Pt1), 176-180 (2003).