

# Acupuncture Alleviates Cerebral Palsy

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Researchers conclude that electroacupuncture plus moxibustion increases the clinical effective rate of physiotherapy for the treatment of infantile cerebral palsy. Binzhou City Traditional Chinese Medicine Hospital researchers combined Traditional Chinese Medicine (TCM) therapy (i.e., electroacupuncture and moxibustion) with standard physiotherapy. Patients receiving both TCM care and physiotherapy in a combined treatment protocol had superior patient outcomes compared with patients receiving only physiotherapy. The physiotherapy control group achieved a total effective rate of 78.9%. The TCM care plus physiotherapy treatment group achieved a total effective rate of 92.9%. The addition of TCM care to physiotherapy increases the total effective rate by 14%. Let's take a look at the results.



The study design was as follows. The investigation involved the selection of 80 patients who received acupuncture and physiotherapy treatment at the acupuncture department of the Binzhou City TCM Hospital. Patients were randomly assigned to a treatment group and a control group. The treatment group had 42 patients, and the control group had 38 patients. Both groups received identical physiotherapy. The treatment group received acupuncture and moxibustion therapy in addition to physiotherapy.

The statistical breakdown for each randomized group was as follows. The treatment group was comprised of 31 males and 11 females, with an average age of 4 ( $\pm 2$ ) years. The control group was comprised of 29 males and 9 females, with an average age of 5 ( $\pm 2$ ) years. The patients

from both groups were comparable as there were no significant differences in terms of their gender and age relevant to patient outcome measures prior to beginning the investigation.

Both patient groups underwent identical physiotherapy regimens. A 1 – 2 hour physiotherapy session was conducted once daily for 5 consecutive days, followed by 2 break days. In total, physiotherapy was administered for 6 months.

The treatment group also underwent scalp and body style acupuncture, electroacupuncture, and moxibustion. Scalp acupuncture for the treatment group was administered on the following lines:

- **Qianshencong to GB6 (vertex-temporal anterior oblique line)**
- **GV20 to GV21 vertex (vertex middle line)**
- **1.5 cun from BL6 posteriorly (vertex lateral line 1)**
- **1.5 cun from GB17 posteriorly (vertex lateral line 2)**
- **2 cun from BL9 downwards (occiput lower lateral line)**
- **GV20 (Baihui)**
- **Ex-HN1 (Sishencong)**
- **GV24 (Shenting)**

The body style acupoints for the treatment group were the following:

- **BL23 (Shenshu)**
- **LI14 (Binao)**
- **LI11 (Quchi)**
- **LI10 (Shousanli)**
- **TB5 (Waiguan)**
- **TB4 (Yangchi)**
- **LI4 (Hegu)**
- **SP10 (Xuehai)**
- **ST32 (Futu)**
- **GB34 (Yanglingquan)**
- **ST36 (Zusanli)**
- **BL40 (Weizhong)**
- **BL57 (Chengshan)**
- **SP6 (Sanyinjiao)**
- **KI3 (Taixi)**
- **BL60 (Kunlun)**

For scalp acupuncture, treatment began with patients resting in the supine or sitting position. Upon disinfection, a 0.25 mm x 25 mm filiform acupuncture needle was inserted obliquely along each selected line and was manipulated with the Ping Bu Ping Xie (attenuating and tonifying) technique. After elicitation of a deqi sensation, the acupuncture needles were connected to an electroacupuncture device. A disperse-dense wave was applied with an intensity level set to patient tolerance levels or until muscle contractions were observable. The needles were retained for 30 minutes for each acupuncture session.

For body style acupuncture, treatments began with patients resting in the supine or sitting position. Upon disinfection, a 0.25 mm x 25 mm filiform acupuncture needle was inserted perpendicularly into each selected acupoint and manipulated first with the attenuating (lifting and thrusting) technique and then with the tonifying-rotating technique. After elicitation of a deqi sensation, a 15 – 25 minute needle retention time was observed. The moxibustion acupoints for the treatment group were the following:

- **GV2 (Yaoshu)**
- **GV3 (Yaoyangguan)**
- **GV4 (Mingmen)**
- **GV5 (Xuanshu)**
- **GV8 (Jinsuo)**
- **GV9 (Zhiyang)**
- **GV14 (Dazhui)**

Between 2 – 3 of the total 7 acupoints were selected randomly for moxibustion treatment. Long moxa sticks were ignited and held 2 – 3 cm above each selected acupoint. Moxa was left in place until the local skin showed initial signs of redness, this is approximately at the 5 – 10 minute marker. Acupuncture plus moxa treatments were administered once daily for 5 consecutive days, followed by 2 break days. In total, the treatment was conducted for 6 months.

The patients' general status were scored before and after treatments. In addition, all patients underwent Gross Motor Function Measure (GMFM) assessment before and after their treatments. The GMFM is a clinical tool designed to evaluate changes in gross motor function in children with cerebral palsy. After treatment, the treatment efficacy for each patient was categorized into 1 of 4 tiers:

- *Recovery: The combined score increasing by over 20%.*
- *Significantly effective: The combined score increasing by less than 20%, but over 10%.*
- *Effective: The combined score increasing by less than 10%, but over 5%.*
- *Not effective: The combined score increasing by less than 5%.*

The researchers compared results. The treatment group significantly produced greater positive patient outcomes than the control group. The total effective rate for the control group that received physiotherapy as a standalone therapy was 78.9%. The total effective rate for the treatment group receiving a combination of physiotherapy and TCM care was 92.9%. The addition of TCM care to physiotherapy increases the total effective rate by 14%. Based on the clinical outcomes, the researchers conclude that physiotherapy combined with electroacupuncture and moxa is superior to using physiotherapy as a standalone procedure.

In Traditional Chinese Medicine, infantile cerebral palsy falls under the following class of disorders: Wuchi (translated as the five slownesses), Wuruan (translated as the five softs), or Wuying (translated as the five stiffnesses). Wuchi is caused by inherent insufficiency of essence and blood, especially insufficiency of kidney jing-essence. Wuruan is caused by inherent qi deficiency of zang-fu organs and kidney jing-essence insufficiency. Wuying is also caused by kidney jing-essence insufficiency. In infantile cerebral palsy, kidney jing-essence insufficiency leads to qi and blood deficiency, malnourishment of the seven orifices on the head, and lack of clarity of the spirit-mind.

The researchers also provide insight into TCM treatment principles based on the aforementioned understanding of infantile cerebral palsy. The focus of treatment is upon three aspects. First, scalp acupuncture opens the seven orifices, stimulates the brain, and benefits the spirit-mind. Second, body acupuncture on kidney related acupoints benefits the kidneys, replenishes jing-essence, and tonifies kidney qi. Third, body acupuncture on yangming meridians and other local areas resolves tetany and relieves pain. Electric stimulation and moxibustion were also used in the study as a supplement to manual acupuncture treatment. Moxibustion warms and frees the meridians, disperses stasis, and strengthens the muscles. Electric stimulation activates the repair and regrowth of nerve cells.

In a related clinical study conducted at the Neijiang Second People's Hospital, Xie and Lu conclude that acupuncture and massotherapy significantly alleviates drooling and improves quality of life scores for cerebral palsy patients. Xie and Lu conclude that cerebral palsy patients treated with acupuncture and massotherapy had significantly greater positive patient outcomes than patients receiving neither acupuncture nor massotherapy. Patients receiving acupuncture and massotherapy had less drooling and demonstrated significant improvements in fine motor movements, adaptive behavior, and social behavior compared with the control group. Acupuncture plus massotherapy patients also demonstrated the ability to consume meals independently better than the control group. The results indicate that acupuncture is an effective adjunct form of medical care for patients with cerebral palsy.

#### References

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