Clinical Study on Acupuncture in Treating Infantile Attention-deficit Hyperactivity Disorder

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摘要 目的：总结探讨针灸治疗小儿多动症的临床疗效、对异常脑电图的改变情况、疗效与证型的关系、疗效与年龄的关系等。方法：将592例患者分为针灸组及中药组。结果：针灸组总有效率为84.4%，中药组为78.8%，前者疗效优于后者($P<0.05$)；针灸组对异常脑电图的改变率优于中药组($P<0.05$)。疗效与年龄之间有非常显著性关系($P<0.01$)，年龄小者针刺疗效较佳。结论：针灸治疗小儿多动症可取得较好疗效，其总有效率及对异常脑电图的改善优于内服中药，肝郁气滞型及年龄小者疗效较好。

关键词 轻微脑损伤综合征； 针刺疗法； 梅花针疗法； 耳穴贴压

Abstract Purpose: To investigate the curative effect of acupuncture on infantile attention deficit hyperactivity disorder, the changes in abnormal electroencephalogram and the relationships of the curative effect with the type of syndrome and age. Method: Five hundreds and ninty-two patients were divided into an acupuncture group and a Chinese medicine group. Results: The total effective rate was 84.4% in the acupuncture group and 78.8% in the Chinese medicine group, and the curative effect was better in the former than in the latter ($P<0.05$); the change rate in abnormal electroencephalogram was better in the acupuncture group than in the Chinese medicine group ($P<0.05$); there was a significant correlation between the curative effect and age ($P<0.01$), and the curative effect of acupuncture was better in the young. Conclusion: Acupuncture treatment has a good effect on infantile attention deficit hyperactivity disorder, its total effective rate was higher and the changes in abnormal electroencephalogram was better than in the Chinese medicine group, and the curative effect was better in the liver-qi stagnation type and in the young.

Key Words Attention Deficit Disorder With Hyperactivity; Acupuncture Therapy; Plum-blossom Needle Therapy; Auricular Point Sticking
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Infantile attention deficit hyperactivity disorder (ADHD) is one of the most common neuro-behavioral disorders in childhood, characterized by poor attention, physical restlessness and difficulty completing tasks. The incidence was 5%-10% in the children below 14 years old[1]. Professor ZHANG Jian-wei has reported the clinical study on the acupuncture treatment of ADHD[2]. He has treated 380 cases by acupuncture and another 212 cases by oral administration of Chinese medications. Their results are compared and presented as follows.

Clinical Data

1. Diagnostic criteria

The diagnostic criterion made by US DSM IV (1991) was referred[1]. The diagnosis can only be confirmed by at least 4 items of respective attention and physical restlessness or by 8 items of either attention or physical restlessness.

(1)Attention

a. Often easily excited by extraneous stimuli;

b. Often reluctant to engage in tasks that require sustained mental effort;

c. Often has difficulty sustaining attention in homework or play activities.

d. Often does not seem to listen when spoken directly;

e. Often loses things necessary for schoolwork, tasks or activities;

f. Often easily distracted in classroom, poor school reports;

g. Often has difficulty organizing tasks and activities;

h. Often fails to finish schoolwork or duties, begins others.

(2)Physical restlessness

a. Often leaves seat in classroom;

b. Often starts to do without careful thinking;

c. Often has difficulty awaiting turn in collective

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activities;

d. Often blurts out answers before questions have been completed;

e. Often has difficulty playing or engaging in leisure activities quietly;

f. Often runs about or climbs excessively in situations in which it is inappropriate;

g. Often take part in dangerous activities;

h. Often fidgets with hands or feet or squirms in seat;

i. Often interrupts or intrudes on others;

j. Often talks excessively.

2. Inclusive criteria

Symptoms in the diagnostic criteria, below 16 years old, persistent treatment for over 3 months.

3. Exclusive criteria

Psychiatric disorders, intelligent dysfunction, with other measures during treatment.

4. Typing criteria

Hepatorenal hypofunction: Hyperactivity, inadequate attention concentration in school, difficulty moving, scribbling writing, poor drawing, lower school marks, pale tongue with less coating and fine pulse.

Liver-qi stagnation: Hyperactivity, like to play, cry when not satisfying his demands, fighting with playboys, not respecting the seniors or teachers, like to climb irrespective of danger, often breaking public property, pale tongue with red tip, thin yellowish coating, taut and fine pulse.

5. General data

All patients came from the outpatient department of acupuncture were into acupuncture group and Chinese medicine group. Among the 380 cases in acupuncture group, 288 cases were male and 92 cases were female; the youngest was 5 years old and the oldest was 15; the course was from half a year to 8 years. Of the 212 cases in Chinese medicine group, 161 cases were male and 51 cases were female; the youngest was 4 years old and the oldest was 14; the course was from 1 year to 9 years. There was no difference in the gender, age, course and abnormal electroencephalogram between the two groups ($P > 0.05$).

Treatment Methods

1. Acupuncture (treatment) group

Hepatorenal hypofunction: Sishencong (Ex-HN 1), Shuaigu (GB 8), Naohu (GV 17), Shenting (GV 24), Neiguan (PC 6), Sanyinjiao (SP 6) and Taixi (KI 3) were selected. These acupoints were needled with reinforcing techniques by rotating the needles, which were retained for 20 min. Seven-star needle was used to tap the Governor Vessel and Bladder Meridians on the back for six times, the acupoints Ganshu (BL 18) and Shenshu (BL 23) in particular.

Liver-qi stagnation: Sishencong (Ex-HN 1), Shuaigu (GB 8), Naohu (GV 17), Shenting (GV 24), Laogong (PC 8) and Taichong (LR 3) were selected. These acupoints were needled with reducing techniques by rotating the needles, which were retained for 20 min. Seven-star needle was used to tap the Pericardium Meridian against its running route and the finger tips.

In both groups, auricular application was conducted with cowherb seeds on ear points Ershenmen (MA-TF 1), Heart (MA-IC), Liver (MA-SC 5), Gallbladder (MA-SC 6), Kidney (MA-SC), Central rim (MA-AT), Subcortex (MA-AT 1) and Sympathetic (MA-AH 7).

Acupuncture and seven-star needle tapping were given once every two days, auricular application once a week. The therapeutic effects were observed after 3-month treatment.

2. Chinese medicine (control) group

Chinese medicines were orally given in this group. Ingredient-modified "Qiju Dihuang Decoction" was given for Hepatorenal hypofunction, and ingredient-modified "Yiguan Decoction" was given for liver-qi stagnation. One dose a day and the therapeutic effects were observed after 3-month treatment.

Therapeutic Effects

1. Criteria for therapeutic effects

The criteria for hyperactivity stipulated by Hyperactivity Commission were referred.

Clinical cure: All 18 symptoms in DSM IV basically disappear.

Marked effectiveness: At least 5 of the 18 symptoms are significantly improved after treatment.

Effectiveness: Two or more symptoms are improved after treatment.

Failure: No symptoms are improved.

2. Treatment results

The therapeutic effects of the two groups were compared in table 1. Treatment group had significantly better effects than control group ($P < 0.05$).

Table 1. Therapeutic effects in the two groups(%)

Group	*N*	CC	ME	Effectiveness	Failure	TER(%)
Treatment	380	50(13.2)	170(44.7)	101(26.6)	59(15.5)	84.5
Control	212	19(9.0)	65(30.7)	83(39.2)	45(21.2)	78.8

Notes: CC, clinical cure, ME, marked effectiveness, TER, total effective rate. Same below.

The correlation between therapeutic effects and types in treatment group was presented in table 2. There was a significant difference between the two types ($P < 0.05$), with better effects in liver-qi stagnation type.

Table 2. Correlation between therapeutic effects and types in treatment group (%)

Type	N	CC	ME	Effectiveness	Failure
A	188	20(10.6)	78(41.5)	45(23.9)	45(23.9)
B	192	30(15.6)	92(47.9)	56(29.2)	14(7.3)

Notes: A, Hepatorenal hypofunction type; B, liver-qi stagnation type.

The correlation between therapeutic effects and ages was presented in table 3. The result showed an extremely striking difference between them ($P < 0.001$), the younger with better effects.

Table 3. Correlation between therapeutic effects and ages in treatment group (%)

Age	N	CC	ME	Effectiveness	Failure
5-9	155	24(15.5)	82(52.9)	36(23.2)	13(8.4)
9-12	126	16(12.7)	50(39.7)	34(27.0)	26(20.6)
Over 12	99	6(6.1)	18(18.2)	27(27.3)	48(48.5)

Discussion

Professor ZHANG argues that ADHD results from innate deficiency and postnatal no-care. Innate deficiency refers to the developmental disorders of baby due to the mother's conditions in pregnancy and perinatal period. Postnatal no-care comprises birth injury, baby's high fever, upper respiratory infection, trauma, dietary inappropriateness, social and mental factors. Innate and postnatal factors can lead to gradual imbalance between yin and yang and organ dysfunction, presenting heart-spirit unquietness, liver-soul agitation, spleen-consciousness inadequacy and kidney-will failure. From long-term clinical practice, professor ZHANG has summed up a series of comprehensive treatment methods, including body acupuncture, seven-star needle tapping and auricular application in the treatment of ADHD. In this method, such four acupoints on head as Sishencong (Ex-HN 1), Shenting (GV 24), Shuaigu (GB 8) and Naohu (GV 17) are the essential ones. Needling Sishencong (Ex-HN 1) can regulate qi in organs and meridians, enrich marrow and nourish brain. Temporal lobe is in close association with learning and memory; needling Shuaigu (GB 8) on temporal lobe area can increase the ability to concentrate and improve motor function. Naohu (GV 17) is located within the balance area of scalp acupoints, where the Governor Vessel and Bladder Meridian converge. Puncturing this acupoint can supplement brain marrow, unblock head collaterals and ADHD children's motor coordination. Seven-star needle tapping on the Governor Vessel and Bladder Meridian on back can regulate the exciting and inhibitory processes of the central nervous system, facilitate to improve the metabolism of nervous mediators, and promote the propagation of nervous transmitters; thus the central nervous system is excited while the inhibition concentrates[3]. Auricular acupoints like Ershenmen (MA-TF 1), Heart (MA-IC), Liver (MA-SC 5), Gallbladder (MA-SC 6), Kidney (MA-SC), Central rim (MA-AT), Subcortex (MA-AT 1) and Sympathetic (MA-AT 7) have close relationship with the central nervous system. Pressing these auricular acupoints can awaken the cerebral cortex and balance the excitation and inhibition of cerebral cortex, consequently to improve cerebral cortex activities.

This study found that acupuncture was more effective for hepatorenal hypofunction type than for liver-qi stagnation, suggesting that the innate factors may relate to the therapeutic effects. Moreover, the therapeutic effects had certain relationship with the patients' ages, the younger the better effects. This may be because the baby's cerebral nerves are still in the rapid development, and acupuncture can exert greater effects. In the children above 12 years old, their cerebral development is near to the adults. Therefore, acupuncture has fewer effects on it.

References

[1]王清江，郑之卿.临床小儿神经病学.北京：人民军医出版社，2000：373.
WANG Qing-jiang, ZHENG Zhi-qing. Clinical Childhood Neurology. Beijing: People's Military Medical Publishing House, 2000: 373.

[2]张家维.针刺治疗儿童多动症临床观察.新中医，1985，17(1)：29.
ZHANG Jia-wei. Clinical Observation of Acupuncture in Treating Infantile Hyperactivity. Journal of New TCM, 1985，17(1)：29.

[3]徐 通.儿童注意力缺乏障碍的脑诱发电位.国外医学·儿科分册，1991，12(5)：35-36.
XU Tong. Cerebral Evoked Potential in Children with Attention-deficit Hyperactivity Disorder. Pediatrics, Foreign Medicine, 1991，12(5)：35-36.

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参考文献(3条)

1. 王清江. 郑之卿 临床小儿神经病学 2000

2. 张家维 针刺治疗儿童多动症临床观察 1985(01)

3. 徐通 儿童注意力缺乏障碍的脑诱发电位 1991(05)

相似文献(3条)

1. 期刊论文 郄玉兰. QIE Yu-lan 针刺配合闪罐治疗儿童多动症的临床观察 -上海针灸杂志2005, 24(7)
目的通过治疗组与对照组的疗效观察,筛选治疗儿童多动症的最佳方案.方法将临床儿童多动症专科门诊患儿102例,随机分为治疗组(针刺配合闪罐疗法)与对照组(王不留行籽耳穴贴敷配合闪罐疗法).结果与结论对两组治疗20次后(近期疗效)及停止治疗30日后(远期疗效)的疗效观察比较,近期疗效治疗组优于对照组,远期疗效治疗组明显优于对照组(P<0.01).

2. 期刊论文 李红 张家维教授针灸治疗小儿多动症380例临床研究 -上海针灸杂志2004, 23(8)
目的探讨针灸治疗小儿多动症的临床疗效、对异常脑电图的改变情况、疗效与证型的关系、疗效与年龄的关系等.方法将592例患者分为针灸组及中药组.结果针灸组总有效率为84.4%,中药组为78.77%,前者疗效优于后者(P<0.05);针灸组对异常脑电图的改变率优于中药组(P<0.05);针灸组中肝肾不足型、肝郁气滞型两型间的疗效有显著性差异(P<0.01);肝郁气滞型较佳.疗效与年龄之间有非常显著性关系(P<0.01),年龄小者针刺疗效较佳.结论针灸治疗小儿多动症可取得较好疗效,其总有效率及对异常脑电图的改善优于内服中药,肝郁气滞型及年龄小者疗效较好.

3. 期刊论文 肖达. 袁凌松. 熊飙. 周黎明 针药结合治疗儿童多动症136例临床观察 -上海针灸杂志2003, 22(10)
目的观察针药结合治疗儿童多动症的疗效.方法采用针药结合治疗136例多动症患儿,并与30例西药对照组进行临床对照.结果治疗后两组行为积分值明显下降,有显著的统计学意义;针药结合组总有效率显著高于西药对照组,且其疗效与年龄、病程无明显的相关性.结论针药结合治疗儿童多动症疗效显著.