

Clinical analysis of TIC syndrome: About 60 cases

Abstract

In order to study the treatment effect of traditional Chinese medicine and massage application in children, from July 2023 to August 2023, 60 cases of children with Tourette's syndrome at Zhongtong Children's Rehabilitation Hospital, Chengdu Southwest Children's Rehabilitation Hospital and Chengdu Southwest Children's Hospital were studied in July 2023, including 36 male cases, accounting for 60% of the total number and 24 female cases, accounting for 40% of the total number. It is divided into three groups: Group A is massage group (20 people), group B is Chinese medicine group (20 people), Group C is massage + Chinese medicine group (20 people). This study integrated domestic and foreign literature. **Objective** To study the effective treatment of TIC syndrome. **Methods** Retrospective investigation and study analysis.

Results A (massage group) significant efficiency accounted for 35%, effective efficiency accounted for 15%, inefficiency accounted for 65%; B (Chinese medicine group) significant efficiency accounted for 75%, effective rate 60%, inefficiency 25%; In C (massage group + traditional Chinese medicine group), the significant efficiency accounted for 95%, the effective efficiency accounted for 75%, and the inefficiency accounted for 5%. **Conclusion** The combination of traditional Chinese medicine and massage is an effective new method for the treatment of TIC syndrome, which has the advantages of effective and no obvious side effects.

[Keywords] TIC disorder; massage treatment; traditional Chinese medicine

Introduction

Pediatric TIC syndrome (Transient TIC disorder, TIC), also known as Tourette's syndrome, is a syndrome characterized by multiple involuntary TIC, speech or behavior disorders [1]. It is usually between 3-15 years, with a higher incidence in boys than girls (4~6):1 [2]. Among the types of childhood diseases, TIC is a relatively high incidence, and the number of patients is also increasing. Tourette is common among school-age children, with recent studies showing that the prevalence is at least 21%, most are transient, while a small number of children have persistent TIC and behavioral problems [3][4]. In recent years, with the development of nerve biochemistry, physiology and pharmacology, a new understanding of the disease [5][6]. There are also more treatments for this disorder, and many of the Chinese medicine treatments have been utilized for the treatment of TIC [7]. In addition to TCM treatments, massage therapy has also been included in the clinical diagnosis and treatment guideline for Tourette's syndrome; however, the recommendation for massage therapy is relatively low, and clinical efficacy still requires more clinical studies to provide evidence of efficacy [8].

This study will examine the clinical efficacy of massage therapy, as well as its combination with traditional Chinese medicine in the treatment of TIC in the clinic, to provide clinical evidence for the use of massage therapy and traditional Chinese medicine in the treatment of TIC. The clinical studies of clinical and laboratory-related tests and diagnostic treatment of 60 TIC patients are reported as follows.

1. Data and methods

Case group of 60 cases, the treatment "massage treatment, Chinese medicine treatment, massage + traditional Chinese medicine mixed treatment", for the investigation and study, in July 2023-August 2023, in xi'an children rehabilitation hospital, Chengdu Southwest Children's Rehabilitation Hospital and Chengdu Southwest Children's Hospital inpatient 60 children retrospective analysis, including male 36 cases, accounting for 60% of the total, female 24 cases, accounting for 40% of the total number. It is divided into three groups: Group A is massage group (20 people) B, group is Chinese medicine group (20 people) Group C is massage + Chinese medicine group (20 people).

The method of division According to age, symptoms and treatment methods, 60 children with TIC disorder were divided into groups A, B and C, with 20 people in each group. Group A was given massage treatment, group B was given traditional Chinese medicine treatment, and Group C was given massage and traditional Chinese medicine treatment to analyze and study which kind of treatment was better.

Table 1 Group A: 20 children with TIC (massage group):

	Year age (7-14 year)	Symptoms (eye-blinks)	Treatment (Massage) excellence	valid	of no avail	
Number /person	11	17	20	7	3	13
Number /person	20	20	20	20	20	20
As a percentage of %	55%	85%	100%	35%	15%	65%

Table 2 Group B: 20 children with TIC movements (TCM group):

	Year age (7-14 Year)	Symptoms (eye-blinks)	Treatment (drug) excellence	valid	of no avail	
Number /person	12	19	20	15	12	5
Number /person	20	20	20	20	20	20
As a percentage of %	60%	95%	100%	75%	60%	25%

Table 3 Group C: 20 children with TIC motion (massage group + traditional Chinese medicine group):

	Year age (7-14 year)	Symptoms (eye-blinks)	Treatment (Massage + medicine) excellence	valid	of no avail	
Number /person	13	20	20	19	15	1

Number	20	20	20	20	20	20
/person						
accountfor.../%	65%	100%	100%	95%	75%	5%

Table 4 Groups A, B and C areas follows:

	age	(7-Symptoms (eye blinks)/person/%/14 years old)	Treatment Significant/human/%	curative effect		T	P
				Effective/human/%	Invalid/person/%		
A	11	17	20	7	3	13	0.51 >
	55%	85%	100%	35%	15%	65%	0.05
B	12	19	20	15	12	5	0.55 >
	60%	95%	100%	75%	60%	25%	0.05
C	13	20	20	19	15	1	0.88 <
	65%	100%	100%	95%	75%	5%	0.05
Total Number of people: %	36	56	60	41	30	19	
	60%	93%	100%	68%	50%	31%	

2. Results

A (massage group) efficiency for 35%, efficiency for 15%, inefficiency for 65%; B (Chinese medicine group) efficiency for 75%, efficiency for 60%, efficiency for 25%; In C (massage group + traditional Chinese medicine group), the significant efficiency accounted for 95%, the effective efficiency accounted for 75%, and the inefficiency accounted for 5%. It can be concluded that the best treatment method of children with TIC syndrome is: massage + Chinese medicine, the joint application of both, the treatment effect is better.

Table 5. Data statistics

	mean	N	Standard deviation	T	p
manipulation	7.66	3	5.03	0.55	
Traditional Chinese medicine + massage	11.66	3	9.45		
	mean	N	Standard deviation	T	

Traditional Chinese medicine	10.66	3	5.13	0.87
Traditional Chinese medicine+massage	11.66	3	9.45	

3. Discussion

To the best of our knowledge, the current study is the first to investigate the effectiveness of traditional Chinese medicine and massage therapy in children with Tic disorder. The results support the hypothesis that the combination of traditional Chinese medical herb and massage therapy has significant clinical efficacy in the treatment of TIC disorders, which is in line with existing research [9]. Massage therapy for TIC disorders has been used to some extent in China and South Korea. Meta-analytical studies have shown that compared with conventional therapies, Massage therapy possess unique advantages such as low pain, significant clinical efficacy, and reduced likelihood of recurrence [9][11]. The results provides clinical evidence for the use of traditional Chinese medicine and massage in the treatment of TIC disorders.

(1) Cause

Tourette disease is mainly caused by the incomplete development of the prefrontal lobe, excessive dopamine secretion in the hypothalamus, and the imbalance of the motor nerve nerves in the extra-pyramidal system. The disease in 3-15-year-old children, more men than women, proportion is about (4-6): 1, more think is caused by mental factors, family factors, environmental factors, psychological factors, such as: children frightened, emotional, parents tension, parents scold scold children, often bullied by classmates, boring, noisy environment, locked psychology, overweight, various factors, can affect the brain development, neurotransmitter secretion, and cause coryramidal system motor nerve disorders[8].

The theory of "unity of form and spirit" suggests that TIC syndrome belongs to the category of "both form and spirit fall ill simultaneously", which is a syndrome of deficiency and excess. Weak physique, insufficient qi and blood, and disharmony among the five organs are referred to as "insufficient qi and form"; The child's strange cries, obscene language, and willful impulses are causing the mind (brain) to lose control. The treatment of TIC syndrome by pediatric massage is a form and spirit co-regulation. By pounding the small heart of the sky, pinching the spine, rubbing the Hundred Hubs and other techniques, the internal and external organs are adjusted together, and the internal organs are treated at the same time. Studies have uncovered that massage possesses the ability to unclog the meridians, regulate blood flow, and promote relaxation by pacifying the nerves[12]. It can calm the child, relieve anxiety and stop twitching, which is a form-spirit co-regulation[12]. Besides, A network meta-analysis has indicated that the implementation of acupuncture and massage therapy (tuina) can effectively alleviate the symptoms of Tourette syndrome and reduce incidence of aversive reactions, showing better clinical safety and increasing patient compliance[9]. Thus, this therapy not only seeks to alleviate the tic symptoms but also endeavors to optimize the overall health status of patients.

(2) Clinical characteristics

The disease is up and down and develops slowly. Very delicate: in the emotional tension, cold weather, mental fatigue, diarrhea, watching TV aggravation, disappear after sleep, often easy to be misdiagnosed: conjunctivitis, rhinitis, pharyngitis parents think it is a bad habit. Tic symptoms, proportion: blink accounted for

56.04%, mouth and mouth accounted for 23.07%. Nodding or shaking accounted for 56.04%, shoulder shrugging 39.56, trunk twitching 6.5%, abdominal muscles 2.02%, and inspiration. Most children start from the eyes, face, and gradually to the distal development [14].

(3) Differential diagnosis:

Clinical need to combine symptoms and laboratory, EEG examination to identify pediatric psychosis, post-infection encephalitis, epilepsy, chorea (Rheumatism), Wilson disease, pediatric attention deficit hyperactivity disorder and other diseases [8].

(4) Dopamine action

Dopamine: Dopamine is an important neural mediator, involved in the regulation of various spirits, exercise, blood pressure and heart in the brain. It belongs to catecholamine neurotransmitter, which is related to people's emotions and feelings, and transmits excitement and happy information in the brain, which is very related to people's pleasure. If lacking or disorder, it will lead to mental and emotional changes [15].

(5) Treatment

① General treatment

Children should eliminate the inferiority complex, establish the confidence to overcome the disease. Coordinate family relations, create a good environment for children to grow up, do not excessively blame, abuse children. Should inform the teacher of the relevant doctor-patient knowledge, and through the teacher to teach other students not because of the strange action of children and ridicule, discrimination, care for classmates [14].

② Medication

Commonly used drugs: risperidone tablets, clonidine transdermal patch, phosphopide hydrochloride, topiramate, calamus hemp wind tablets, aripiprazole, foperidol, sodium valproate, etc [16].

③ Mental intervention

Behavioral therapy: reward patients' good behavior, correct and strengthen bad behavior, and replace bad behavior with new effective behavior. Educate children and parents, adjust mentality, eliminate stigma, correct understanding of the disease, do not pay too much attention to children's syndrome form, reasonable arrangement of daily life. Education and family intervention therapy. Parents should coordinate the family relationship, especially the parent-child relationship with their children, to give a harmonious family growth environment for children. Give parents the necessary guidance to avoid conflicts and contradictions with their children, and get along harmoniously with their children [14].

④ Chinese traditional treatment

In the treatment of multiple syndrome, more Chinese medicine is used, commonly used Chinese medicine: "hookvine, white peony root, licorice, Gastrodia elata, silkworm, scorpion, pinellia, Poria, pleurum, chrysanthemum, oyster, bamboo, jujube, jujube, gold, Dendrobium, endrobium, rushes" and so on. According to different symptoms of different Chinese medicine compatibility. As well as massage, brain tai, ear acupoint, meridian embedding treatment, Chinese medicine decoction with treatment [8].

⑤ Other treatments

Transcranial magnetic stimulation therapy, multi-parameter biofeedback, current stimulation and other brain neuroregulation therapy.

(6) Prevention and prognosis

Eliminate all kinds of tension factors and local irritation stimulation, eliminate the factors that induce TIC. This symptom has a good prognosis, mostly a short process, lasting for several months, and a few can become habitual and persistent, but it has no effect on daily activities [17].

4. Conclusion

Through research and analysis, it is shown that the best effective treatment of children with syndrome is: massage + Chinese medicine, the two are used together, the treatment effect is better.

【Reference】

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