The Effect of TCM Nursing on Children with Viral Encephalitis

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ABSTRACT

To analyze the effect of TCM (Traditional Chinese medicine) nursing on the children with encephalitis, sixty-two children with viral encephalitis were randomly divided into one observation group and control group; the control group was given conventional treatment, while the observation group was treated with TCM nursing on the basis of routine treatment. By comparing the clinical efficacy, symptom recovery time, hospital stay, and disability recovery between these two groups, it concludes that: (1) The total clinical efficacy rate is 93.54% (29/31) in the observation group and 77.41% (24/31) in the control group; the difference is statistically significant (P<0.05); (2) The recovery time of disturbance of consciousness, convulsion and physical disorders in the observation group is obviously lower than that of the control group, and the difference is statistically significant (P<0.05); (3) The incidence of physical disorders, language barriers, and behavioral abnormalities after one year in the observation group is 22.4%, clearly lower than 51.4% of the control group; the difference is statistically significant (P<0.05). Therefore, the TCM nursing has a significant effect on the recovery of children with viral encephalitis by reducing the disability rate of children, which is worthy of clinical application.

Key Words: Viral Encephalitis, Traditional Chinese Medicine (TCM) Nursing, Curative Effect

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Introduction

Viral encephalitis means the intracranial acute inflammation caused by multi-viruses (Wang, 2013), mostly by viral invasion of brain parenchyma (Ren *et al*., 2010), resulting in central nervous system infection; it is more latent in the trigeminal nerve (Kim *et al.,* 2013). The main manifestations of children include the fever, vomiting, mental disorders, joints and movement disorders etc. It mostly occurred to infants and young children abruptly with the disease course 10-20 days. At present, there are no specific antiviral drugs in clinical practice, so the symptomatic treatment and supportive care have been often taken. Generally, the patients have a good prognosis, but different sequelae might happen to some children due to brain tissue damage, which will seriously affect their quality of life. Therefore, based on conventional therapy, this study aims to provide the systematic TCM interventions for children, which has achieved satisfactory clinical results.

Methods

General information

62 children with viral encephalitis admitted in hospital from January 2015 to June 2017 were taken as object of study. They were randomly divided into a control group and an observation group, with 31 patients in each group, including 37 males and 25 females aged 2-8 years, (5.41±1.06) on average; all children were admitted to hospital by lumbar puncture, cephalometric magnetic resonance examination,

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and electroencephalogram diagnosis; according to the examination results and clinical manifestations, it indicates mild changes in 18 cases, moderate changes in 30 cases, severe changes in 14 cases. In terms of gender, age, lumbar puncture results, cranial MRI, etc., there was no significant differences between these two groups (p>0.05), which could ensure the comparability (Zhang, 2012).

TCM nursing method

Both groups of child patients were given conventional treatment. The control group was given routine care on the basis of routine treatment, while the TCM nursing interventions were specifically made for the observation group. The details are as follows.

(1) Acupuncture therapy

It includes ordinary acupuncture and electro-acupuncture. In the acute stage of convulsions, the acupuncture treatment was immediately made for the children with convulsions in the acupuncture points such as philtrum-philtra and Hegu etc., until the child's vital signs were stable, and also according to syndrome differentiation type, electroacupuncture treatment were made in the acupuncture points Zusanli, Sanyinjiao, etc. for 30 minutes every time, once a day (Xu *et al*., 2011).

(2) Auricular acupuncture treatment

When the neurological symptoms of children no longer developed for 48 hours, the auricular-plaster therapy can be taken: press for 3-4 times every day, about 3-5 minutes every time (ears red, fever, acupuncture point pain with pressing) , and replace the auricular-plaster every four days.

(3) Chinese medicine foot bath

When the children are stable with nervous system symptoms, their feet are soaked in the Chinese herbal solution for about 30 minutes every time, once a day, and 3 days for one course of treatment (Liu, 2014).

(4) Acupoint Application

According to the child patients' symptoms, the acupoints application was given to the children by the syndrome differentiation to get the point for 2-4 hours every time (per the child's age), once a day, and 5 days for one course of treatment (Zhang *et al.*, 2013).

(5) Rehabilitation treatment

It includes early functional assessment, early exercise therapy, late limb function training, and rehabilitation guidance. Only when the children have stable vital signs, and their neurological symptoms no longer develop for 24h, evaluation of children can be started, by formulating an individualized rehabilitation training program, including the limb exercise, speech training, mental training and psychological rehabilitation guidance. Rehabilitation treatment runs through the entire treatment cycle of children and it would be adjusted in time according to children' symptoms recovery condition.

Criterion for curative effect

According to the symptoms recovery of children, the criterion is divided into three levels: the marked level: clinical symptom is improved within 3 days; effective: clinical symptoms disappear within 4-7d; ineffective: clinical symptoms disappear or does not disappear over 7d. Judgment criteria: total clinical efficacy rate (%)=marked improvement rate (%)+Efficacy rate (%).

Observational index

The clinical symptoms recovery time, Linchuan efficacy, post-treatment disability etc. were compared between the two groups.

Statistical method

The data was analysed by applying the SPSS18.0 statistical software, and the enumeration data were analysed by X2 test; besides, t-test was used, P<0.05, indicating the statistically significant meaning.

Results

Efficacy comparison between two groups

The total efficacy rate of observation group is obviously higher than that of control group (P<0.05) (Table 1).

Table 1. Comparison of clinical efficacy [n (%)]

Group	n	Marked	Effective	Ineffective	Efficacy Rate (%)
Observation group	31	15 (48.3%)	14 (45.1%)	2 (6.4%)	93.4
Control group	31	6 (19.3%)	18 (58.1%)	7 (22.5%)	77.4

Note: P<0.05 by comparison with control group

Table 2. Comparison of symptom relief and recovery time [d]

Group	n	Consciousness disturbance	convulsion	Physical disorder
Observation group	31	4.41±1.08	6.82±1.56	19.77±3.08
Control group	31	1.21±0.38	1.97±0.45	11.68±1.68

Note: P<0.05 by comparison with control group

Refer to Table 3 for details.

Comparison of disability condition between two groups after 1-year treatment (P<0.05)

Table 3. Comparison of clinical efficacy [n(%)]

Group	n	Physical disorder	Mental retardation	Speech disorder
Observation group	31	7 (22.5%)	4 (12.8%)	5 (16.1%)
Control group	31	3 (9.6%)	2 (6.4%)	2 (6.4%)

Note: P<0.05 by comparison with control group

Comparison of symptom relief and recovery time between two groups

The clinical symptoms and recovery time in the observation group were significantly lower than in the control group (P<0.05)(Table 2).

Discussion

Viral meningitis is an inflammatory disease of the brain parenchyma with fever, disturbance of consciousness, and vomiting as the main clinical manifestations (Cao, 2016). Failure to get timely treatment can cause central nervous system infections, including cerebral edema, softening and necrosis, and eventually lead to paralysis or death in children (Li *et al*., 2015). In recent years, related literature has reported that the incidence of viral encephalitis in infants has increased year by year. Due to the complicated and critical condition of the disease (Yi, 2014), the treatment is relatively difficult and the prognosis is generally not satisfactory. Therefore, in addition to the standardizing treatment, standard and systematic nursing plans should be formulated for children.

In this paper, the acupuncture treatment is a unique treatment for diseases in China, with the rapid treatment effect and the simple operation method; by dredging the meridians, reconciling yin and yang, and strengthening body resistance and eliminating evil, it can significantly improve acute convulsive symptoms and various kinds of dysfunctions in recovery period. Besides, the auricular acupuncture treatment is applied to the auricle through the seed of Vaccaria, and by pressing and stimulating the acupuncture points to achieve the function of meridians, organs, and qi and blood; it can relieve the symptoms of children. Furthermore, in Chinese medicine foot bath, the medicinal ingredients mainly include Daqingye, Astragalus, Forsythia, Nepeta, and so on; with the warming effect of the bath water, it is possible to clear the muscular interstices, warm channel and expel cold, dredge the meridians for achieving the effect of reducing the internal heat; so, it can clearly relieve the high-fever symptoms of children. In the acupoint application therapy, the hospital self-made method is adopted by grinding certain Chinese herbal medicine into fine powder and then adding excipients; the mixed paste is applied to acupuncture points and skin, achieving the effects of clearing away heat and toxic material, warming channel and expelling the cold. Finally, rehabilitation treatment can accelerate the recovery of clinical symptoms and signs, significantly reducing the disability rate of children through systematic and sequential rehabilitation therapy. Therefore, it is particularly important to carry out systematic TCM interventions for children with viral encephalitis.

Through clinical observation, it is found that standardized and systematic TCM nursing can significantly relieve symptoms in children with viral encephalitis and reduce the occurrence of dysfunction in latter-stage treatment, esp., the effect of reducing the disability rate of children is more prominent, which can relieve the children's pains and avoid the side effects of Western medicine. This research fully utilized the advantages of traditional Chinese medicine and TCM traditional external therapies to make up for the shortcomings of western medicine treatment, being worthy of clinical application.

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