



RESEARCH ARTICLE | FEBRUARY 28 2019

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AIP Conf. Proc. 2079, 020030 (2019)

<https://doi.org/10.1063/1.5092408>



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Summary of 100 Cases of Sudden Deafness Treated by Erfukang Oral Liquid

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Abstract: the curative effect of 100 cases of sudden deafness treated with ear rehabilitation objective to evaluate oral solution. Randomized grouping based on conventional western medicine treatment combined with ear rehabilitation oral liquid in treatment of 100 cases of sudden deafness patients after treatment. Two weeks of continuous treatment, the treatment group and the control group were effective, the treatment group than the control group ($P < 0.05$). The ear health oral liquid has a good therapeutic effect on sudden deafness.

INTRODUCTION

From May 2010 to May 2016, 100 cases of sudden deafness were treated with Erfukang oral liquid on the basis of routine western medicine, and 100 cases were treated with western medicine alone. Significant clinical results have been achieved. The report is as follows:

DATA AND METHODS

Case Selection Criteria

The diagnostic criteria and grading criteria of western medicine were all combined with the diagnostic criteria of sudden deafness made by Jinan in 2005. The international standard of deafness grading was published by (ISO) in 1964. According to the average hearing threshold of 500Hz, 1000 Hz, 2000 Hz, 4000 Hz, the hearing loss was divided into mild deafness, moderate severe deafness, severe deafness and extreme deafness at 26-40dB, 41-55 dB, 56-70 dB, 71-90 dB and > 90 dB respectively.

According to the criteria for the diagnosis of TCM symptoms formulated by the State Administration of traditional Chinese Medicine in June 1994, the symptoms of "violent deafness" in "Otolaryngology of traditional Chinese Medicine" were classified as "violent deafness": sudden deafness, nasal obstruction, and runny nose [1]. Or have headache, ear stuffy bulge, or have evil cold, fever, body ache; tongue coating thin white, vein floating on fire 2 liver-fire inflammation: after emotional depression or irritation, sudden deafness, accompanied by bitter mouth dry, constipation urine yellow, face red, eye red; tongue red, fur yellow, pulse dazzling number; 3 hyperactivity of liver yang: sudden deafness after irritation, dizziness, headache, bitter mouth, irritability and irritability; thin white tongue coating, 4 qi stagnation Blood stasis: deafness with ear distention, tinnitus endlessly, or deafness due to strong sound shock; tongue is dark red, veins are astringent and lack of qi and blood deficiency: body is weak, facial color is not bright, sudden deafness; or after several days of deafness, headache, ear distension and other symptoms are eliminated, Facial color, dizziness, voice weakness, limb burnout, and so on; light tongue, thin fur, weak veins.

Exclusion criteria 1 pregnancy and lactation women with severe systemic diseases, severe mental disorders or language disorders, patients who could not complete the treatment according to the clinical trial program had a history of hearing loss. (4) the average frequency of damage < 20dB5 has definite causes that can be traced back, such as ear

trauma, knock, ototoxic drugs, related viruses, bacterial infections and other diseases which can lead to hearing loss. Other symptoms associated with cranial nerve injury, such as physical examination of facial paralysis, imaging, acoustic impedance examination, found external ear, middle ear, inner ear inflammatory diseases, anatomic abnormalities, acoustic neuroma and so on.

Clinical Data

In this summary report, all cases were examined by (MAICO) MA51 audiometer in Germany. The tests were carried out in the sound isolation chamber. The environmental noise and instrument calibration were all combined with national standards, and all cases were subjected to acoustic conductance test. All the 200 patients with sudden deafness including middle ear and other external ear diseases were hospitalized in the department of otolaryngology. All the selected patients were monaural, including 97 males, 103 females, 92 left ears and 108 right ears. Age 16-70 years (mean 36 ± 1.5 days), deafness was 30-100 dBHL. the course of the disease was the most severe. Short 4 hours, the longest 60 days (mean 13 ± 2.1 days). All the patients were randomly divided into two groups according to the time sequence. In the treatment group, there were 45 males, 55 females, 40 left ears and 60 right ears, aged 16-65 years (mean 34 ± 2 years). The course of disease was 4 hours to 45 days (mean 10 ± 1.9 days). In the control group, there were 52 males, 48 females, 52 left ears and 48 right ears, aged 21-70 years (mean 38 ± 2 years). The course of disease was 1-60 days (mean 15 ± 2.2 days). There was no significant difference in the ratio of male and female, age composition, course of disease, degree of hearing loss and associated symptoms between the treatment group and the control group ($P > 0.05$). The degree and associated symptoms of hearing loss in both groups are shown in Table 1.

TABLE 1. Treatment group and control group comparison of hearing loss and associated symptoms in patients.

Group	Degree of hearing loss (ear)			Concomitant symptoms (ears)			
	Extremely severe	severe	moderate	Average hearing loss (dBHL)	tinnitus	circumgyration	Ear stuffy
Treatment group	14	65	21	65	92	10	30
Control group	13	60	27	63	90	8	27

Observation Method

In the control group, 100 cases were treated with low molecular weight dextran, adenosine triphosphate, coenzyme A by intravenous drip [2], methylcobalamin dispersible tablets 0.5mg3/ daily and prednisone acetate 1mg/kg/ day (no more than 60mg in total amount) on 1-3 days. If effective continue oral for two days, if ineffective, stop glucocorticoid.

Treatment group: 100 cases were treated with Erfukang oral liquid on the basis of western medicine in control group. Erfukang oral liquid ingredients: ginseng, safflower, Chuanxiong, jujube kernel, Acorus calamus, Bone-broken, Luluotong, fruits, Ophiopogon, musk. Functions: tonifying Qi, soothing brain, activating Blood Circulation, dispelling Wind and dredging collateral, nourishing Yin and Kidney, tinnitus and Deafness, it can also be used for the rehabilitation of ischemic apoplexy of qi deficiency type. Usage: 20 ml, 2 times a day, for 14 days. Manufacturer: PLA 371 central hospital preparation room. After 2 weeks of treatment, electrical audiometry and acoustic conductance were reexamined, and the results were recorded.

Curative Effect Evaluation Standard

According to the Chinese Association of Otorhinolaryngology to evaluate the efficacy of the criteria, that is, divided into 4 grades. Cure: after two weeks of treatment, the hearing frequency of 0.25-4 kHz returned to normal, or the level of Daquin ear, or pre-illness level, tinnitus, vertigo, ear stuffy symptoms disappeared; remarkable effect: the above frequency average hearing increase 30 dB, tinnitus, vertigo, The symptoms such as ear stuffy were obviously relieved or partially disappeared; effective: the average hearing of above frequency increased 15-30 dB, tinnitus, vertigo, ear stuffy and other symptoms alleviated; ineffective: the above frequency average hearing increased below 15dB, tinnitus, dizziness, etc. A slight or no relief from symptoms such as stuffy ears.

Statistical Method

The statistical software SPSS17.0 was used to process the data between the two groups statistically, the measurement data between the two groups were tested by t-test, and the counting data between the two groups were tested by X2 test. The difference was statistically significant.

RESUTL

Comparison of Curative Effects between the Two Groups

After 2 weeks of treatment, the total effective rate of the treatment group was 80.0, and the total effective rate of the control group was 69.0. The total effective rate of the treatment group was better than that of the control group ($P < 0.05$), and the difference was statistically significant ($P < 0.05$).

TABLE 2. Comparison of curative effects between two groups.

Group	Number of examples	Clinical cure	excellence	effective	of no avail	total effective rate
Treatment group	100	20	50	15	15	80.0%
Control group	100	14	35	20	31	69.0%

Note: the treatment group compared with the control group $P < 0.05$.

Comparison of Concomitant Symptoms between the Two Groups

Comparing two groups of accompanying symptoms, some patients have one or more of the following symptoms. The symptoms of the treatment group and the control group before and after treatment are as follows (Table 3):

TABLE 3. Comparison between the two groups before and after treatment.

Group		Tinnitus	Ear stuffy	Circumgyration
Treatment group (n=100)	pretherapy	92	30	10
	post-treatment	35	0	0
Control group (n=150)	pretherapy	90	27	8
	post-treatment	55	10	0

Note: compared with the control group before and after treatment, the symptoms of tinnitus, ear stuffing, vertigo and vertigo were significantly different ($P < 0.05$, $P > 0.05$, respectively).

Untoward Effect

There were 2 cases of skin allergic reaction, 1 case of nausea and 1 case of palpation in the treatment group, while in the control group, there was 1 case of nausea and 1 case of palpation during the treatment period (see Table 4).

TABLE 4. Comparison of the occurrence rate of adverse reactions between the two groups (case study).

Group	Number of examples	Number of adverse reactions	Adverse reaction rate
Treatment group	100	4	4.0%*
Control group	100	3	3.0%

Note: compared with the control group ($P > 0.05$), there was no significant difference between the two groups.

DISCUSSION

Sudden deafness is one of the common emergencies in the department of otolaryngology. The hearing of the patients usually drops to the lowest point in a few minutes or hours. Some patients can drop to the lowest point in 3 days, and can be accompanied by tinnitus and dizziness at the same time. At present, the etiology of sudden deafness is not clear. The causes of sudden deafness in western medicine are blood flow disorder, edema, vascular dysfunction, virus infection theory, labyrinthine window rupture, allergy theory and so on [3]. Many scholars believe that the disease is caused by anoxia of the inner ear labyrinth, and generally tends to the theory of microcirculation disorder and virus infection of the inner ear [4]. At present, the treatment of sudden deafness mainly starts from the following aspects,

including the treatment of intracortical steroid hormone. At present, hormone therapy has been used as the first-line drug for the treatment of sudden deafness at home and abroad [5-6]. The therapeutic mechanism of this scheme includes [7-8]: By regulating carbohydrate, protein metabolism, increasing the number of specific mRNA, binding with corresponding receptors, altering specific gene expression or transcriptional state, regulating osmotic pressure, inhibiting immune response, improving microcirculation, reducing endolymphatic pressure, A large number of studies have found that 50 to 65% of the patients with sudden deafness can or may get good results after conventional comprehensive treatment, but some of the patients still have a poor prognosis. And the reasons for the poor therapeutic effect are not clear [9-10]; (2) anticoagulant thrombolytic therapy. At present, the commonly used drugs in China include batroxobin, urokinase, etc., to improve the microcirculation of the inner ear. The commonly used drugs are Ginkgo biloba extract (Ginado), nimodipine, low molecular dextran, etc. Neurotrophic preparation, commonly used mecobalamin, vitamin B12 and other 5 hyperbaric oxygen treatment. Sudden deafness falls under the category of "violent deafness" in traditional Chinese medicine. According to the difference of pathological mechanism, the TCM literature also has gas deafness, prolonged deafness, sudden deafness, yang deafness, yin deafness, wet deafness, stroke, syncope deafness, toxic deafness, vacuity deafness, wind deafness. Name for many diseases, such as deafness, sudden deafness, distension in the ear, tinnitus and vertigo. Chinese medicine believes that the fundamental cause of this disease lies in the disorder of qi and blood, the lack of the vein of the ear, and the stagnation of qi and blood stasis and phlegm coagulation are the central links of the disease, which runs through the whole process of the disease. Clinically, patients have overworked and work, emotional tension history, liver stagnation and spleen deficiency. Liver stagnation Qi stagnation blood stasis, spleen deficiency phlegm coagulation, ear resuscitation qi and blood failure, deafness. The principle of regulating liver and spleen and nourishing the kidney and calming the liver. Liver strong, main catharsis, happy bar, evil depression, its nature to increase hair extension for the smooth; spleen softness, the main operation, clear, like dryness not wet, to health, clear and clear for and. Liver-regulating liver is timely and appropriate, Qi and blood line, blood stasis powder; and spleen clear rise, clear Qi rising, phlegm turbid, blood stasis down, phlegm dampness. Qi and blood flow, phlegm agglutination, then deafness is cured. "ear holes" was clearly put forward in Yilin's Correction of mistakes. The inner tubules pass through the brain, and there is congestion outside the tube, which causes deafness. "

Erfukang oral liquid is an in-hospital prescription based on the theory of traditional Chinese medicine and modern pharmacological research, aiming at the pathological mechanism of sudden deafness, which has been accumulated by our hospital for many years. It is composed of ginseng, safflower, Chuanxiong, jujube kernel, Acorus calamus, Bone-broken, Luluotong, fruits, Ophiopogon, musk, 10 Chinese herbs, the prescription is composed of ginseng to invigorate the kidney and invigorate the spleen, to strengthen the astringency and invigorate the essence, Chuanxiong and safflower have the functions of activating blood circulation, removing blood stasis and unblocking collaterals; Bone-broken tonifying kidney tonifying essence; Lu Lutong, Musk, Shi Changpu Tongluo; Qi and Guo, jujube kernel, liver and kidney, nourishing heart and tranquilizing spirit; Ophiopogon, nourishing yin, nourishing lung and clearing heart. The whole prescription all drugs coordinate, raise the Qing Yang, regulate qi and blood, dispel the external evil, replenish the liver and kidney In 2000, the specimen played the function of clearing the orifices and recovering the hearing. Modern pharmacologic

The clinical report confirmed that the total effective rate of the treatment of sudden deafness was higher than that of the control group, and the improvement of tinnitus and tightness with symptoms was better than that of the control group. When using Erfukang oral liquid, avoid women with menstrual, pregnant, lactating and haemorrhagic patients. No obvious adverse reactions were found in the treatment of sudden deafness by Erfukang oral liquid, which opened up a new way for the treatment of sudden deafness and sensorineural deafness, which is worthy of further popularization and application.

ACKNOWLEDGEMENT

This study is supported by Science Development Project of Henan Province (132102310408), and Key Science and Technology Project of Xinxiang, Henan Province (ZG14014).

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