Comparison of therapeutic effects between comprehensive therapy and routine

Therapy in treatment of occupational chronic n-hexane poisoning

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Abstract: I objectiveToevaluate the therapeutic effects between comprehensive therapy and routine therapy in treatment of occupatioNAL Chronic n-hexane poisoning.Methodsby randomized controlled trial, 116 cases with occupational chronic n-hexane poisoning were divided into two GROups: the control group (n=58) and the Treatment group (n=58). Subjects in the control group were given vitamin BA and Vitamin B/b127 for Neural Nutrition; and Danshen and deproteinized calf blood extractive injection for activating blood circulation to dissipate blood. Subjects in the treatment group were treated with comprehensive treatment including traditional Chinese and Western Medicine, which including mouse nerve growth factor, acupuncture, physical therapy (infrared therapy, microwave irradiation PY), Chinese Medicine steaming washing and comprehensive rehabilitation therapy for a period of weeks in addition to the Conventional treatment. The curative effect and adverse reactions of both groups were observed after weeks, and the treatment results and hospital stay were up. Results before treatment, no significant differences (P > 0) were noted in both groups in scores of neurological symptoms, signs, activities of daily living and neurogenic damage indexes of electroneuromyography including motor digital latency (<b137>(MDL), motor nerve conduction velocity (MCV), sense nerve conduction velocity (SCV) of median nerve, ulnar nerve, sural nerve or common peronealE; and the detection of lengthen MDL, shorten MCV and SCV. After treatment, patients in both groups got better in terms of the above indicators (P < 0), with larger extend OF Improvement noted in the treatment group than in the control group (P < b20 < 0.05). No obvious adverse reactions were noted in the 2 groups. Hospital stay of patients in the treatment group is about 2 monthsshorter than the control group (b147>P< 0. Conclusion The Therapeutic effects of therapy on occupational chronic n-hexane poisoning are obviously Better than routine therapy, which is an effective and safe therapeutic method.

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N-hexane is a widely used organic in industrial production solvent, on electronic mechanical surface cleaning, shoe making, printing. Glue and organically widely used in industries such as synthesis, often leads to group occupational chronic N-hexane poisoning Events. Chronic N-hexane poisoning mainly shows more Sex peripheral...
neuropathy, patient recovery is slow, Long Duration, due to no effect antidote, so relieving Patient Clinical symptoms, shortened course of treatment become an important target for clinical therapy. This study combines multiple probEd Effective therapy for chronic n-hexane poisoning, Todevelop a traditional Chinese and western medicine Comprehensive Treatment for chronic n-hexane poisoning with treatment, and general therapy method comparison. Analysis of clinical therapeutic effect and safety, for development provide a basis for scientific treatment.

1. objects and methods

1.1 objects with%Year Ten months to 2015 Year 5 Month in Guangdong province Occupational disease Prevention Hospital 16 case Chronic N-hexane poisoning ????? randomized controlled trial, on patients stay in our hospital 1 Week, using random number Table method, divide patients into treatment group and control group, each%Example All patients by 3 above our hospital occupational disease diagnostic physician, non GBZ84-2002: occupational Chronic N-hexane poisoning diagnostic standard No Group Diagnostics. 2. where, light, medium, Severe poisoning respectively 29, 6 and cases, male Example, female Example into the standard: ① all no the same degree of bilateral symmetry to the distal extremity of the extremities and the (or)" symptoms and signs such as Dyskinesia; ② nerves-EMG (electroneuromyography, enmg) Show varying degrees of slow nerve conduction slows down the main changes and neurogenic damage ③ no Merge serious illnesses or complications with other systems; ④ previous myasthenia gravis Central nervous system disease such as weakness and cerebrovascular diseases, No contact over its His nerve poison like thallium, Arsenic and ethylene oxide, No history of occupational poisoning; ⑤ Troubleshoot multiple neuropathy due to other causes, periodic paralysis and for diseases such as sexual dystrophy ⑥ Before entering this study, no previous BVitamins, huxue Huayu, rat nerve growth factor (Mouse nerve growth factor, mngf), Acupuncture, Physical Therapy, Herbal Fumigation and rehabilitation therapy standardized Chinese and Western medicine treatment; ⑦ No tomngfallery; ⑧ Non-gestational women. This study has been approved by the Guangdong profession the Medical Ethics Committee of the hospital, All subjects informed Agreement.

1.2 Method

1.2.1 drugs and instruments Salvia miltiorrhiza injection (ML/Branch, China is Great Youth Pharmaceutical Co., Ltd.); calf blood protein extract TensmL, Chennai (Austria) Co., Ltd.; injectmg fall called/bottle, biologically active AU/bottle, Shuitai God (Beijing) Biopharmaceutical Co., Ltd.); sterilization Water for injection (China Grand Graves Pharmaceutical Co., Ltd.); vitamins B, Injection (Ｇ/Branch, Shanxi Jin Xin Shuang he pharmaceutical Co., Ltd.); Vitamins B1 Slice (Wide East China Pharmaceutical Group Co., Ltd.), keypoint V2.02 Muscle electric potentiometer (Denmark Dantec Company); HL-mlow-frequency Power Sub-pulse therapeutic instrument (Nippon Institute of Good MA Research) 6805-type Electric needle (Shantou Medical Equipment Factory Co., Ltd.).

1.2.2 Treatment ① control group to general treatment, include to Vitamins B, and vitamins B1 vegetative nerve therapy, Salvia miltiorrhiza injection and calf blood albumin extract activating blood stasis method: vitamins B1, mg Oral, 1 times/; Vitamins B injection net intramuscular injection Fire, 1 Times/d, Totalaweek, Salvia miltiorrhiza injection m. Add quality scoreto 5.0% glucose injection on ML intravenous drip, calf blood goes protein extract only ML adds a mass score of 5.0% glucose ntection m. Intravenous drip, is 1 Times/D, 4 Week is 1 Session, 1 after session change to monthly infusion 2 Week, TotalWee. ② treatment group. on that control Group general treatment based on, Add MNGF, Acupuncture, Physical Therapy, Chinese herbal fumigation and rehabilitation treatment, Totalaweek. mngf treatment: injectmg fall PG/D, with 2 ML after water for sterilization is dissolved, intramuscular injection fire, 1 times/D, 4 Week is 1 Session, Total 3 Session. Acupuncture treatment with hand, foot yang ming via acupoints, each time the hands, Double-legged symmetric selection 5 to Point, main Point 2 Treatment of electroacupuncture, 1 Times/D, Ten Times 1 Session, per therapy process interval 1 Week. Chinese Herbal fumigation treatment with Guizhi, safflower, Peach kernel, when Back to chuan xiong, Salvia miltiorrhiza, dry Ginger, There rhannia, Cow knee and radix paeoniae rubra boil pharmaceutical liquid, everytime
The patient is treated with a EMG-evoked potentiometerenmgCheck, with singlepolarpin Electrodes and annular electrodes, detect median nerve in patient, rulerof the same by, Distal latency of the movement of the sural nerve or the common peroneal nerve (Motor Digital Latency, MDL)/motor nerve conduction speed (Motor nerve conduction Velocity, MCV), sensory nerve conduction speed (Sense nerve conduction velocity, SCV) and amplitude. Determination method and sentence break standard reference GBZ76-2013 “Occupational Acute chemical toxicity Neurological Diseases Diagnostic Criteria” Appendix Band Appendix Cabout ruleset. record corresponding nerves MDL, MCV, SCV measured values and MDL extended, MCV slow down and SCV slow Checkout case.

1.2.4 observe metrics and effect decisions① Basics with The line design of the "Basic Questionnaire, collect the sex of the patient, Occupation History of contact with occupational hazard factors (including occupational N-hexane Contactseniority), age at admission, previous history, Current History, poisoning degree and previous Treatment Information. ② neurological impairment score. to observe neurological symptoms of patients with score, Signs and daily life activities Ability (activities of the daily Living, ADL) Improvement, Weekly check Check and record1 times. Neurological symptom observation items include numbness, pain, pain and unusually cold or hot feeling; Neurological Signs observation project includes limb end feel (Vibration feel, Tactile, Pain), muscle Force (Grip Strength, Finger Expand, Thumb pointing back, ankle back flexor force) and tendon reflection (Two-headed muscle, three-head muscle, four-iceps, Achilles Tendon reflection). using the score method, sense Decreases degrees are normal, decrease, missing, Torecord 3.0~1.0 divide, muscle Strength 5.0~1.0 level, Torecord 5.0~1.0 divide. ADL evaluation includes pingWalk, climb Stairs, Write, Eat, Dress and footwear, Bathe, Potty, wash clothes, Squat Sports and cycling etc Ten Item basic activity. Press normal, close to normal, Large dependencies, cannot be graded to 3.0, 0, 1.0, 0isdividedinto. ③ Lab Check: includes three general, liver function, kidney function, Myocardial Enzymes, electrolyte, ECG and enmggete. Before treatment, check 1 Times. ④ bad events: keep track of bad events rulecure12week after, to 2Group of patients before and after treatment of cases with Compare, To evaluate the effect.

1.2.5 Follow-up on treatment outcomes and hospitalization time by Week treatment after 2 group patients using the treatment group of Chinese and Western medicine in this study Cure Scheme for treatment, until clinical recovery. clinical cure for patients home ends, collection 2 Group personnel treatment outcomes and hospitalization time information, forward Step analysis. clinical cure refers to patients with sensory disorders, Sports Obstacle elimination missing, tendon reflexes and muscles are back to normal; enmgCheck results are normal or slightly exception6-29.

1.3 statistical analysis take the SPSS20.0 Software statistics by analyze. measurement data by normality check, conforming to normal or approximate positive State distributor, tox±s Description, Comparison of average between groups using completely random Design tcheck (Fanchazz) or correction tcheck (when the variance is uneven), The comparison of the mean before and after treatment in the group uses paired T validation; does not conform to
2. Results

2.1 Basic Condition control group of patients, Light, neutralize heavy n-hexanepoisoning respectively have, 27, example, Age?0 ~ 48.03[7.3] year old, N-hexane contact seniority M(?) = 13.9 (1.0 ~ 60.0) month. treatment group Patients, light, neutralization severe n-hexane poisoning respectively have 14,, Example, age 18.0 ~ 45.0 26.9 ± 6.8 old, N-hexane contact seniority M(?) = 1(2.0 ~ no.0) month. 2 Group patient Age, N-hexane contact seniority and toxic process degree rating distribution comparison, There is no statistically significant difference between (P>0.05).

2.2 2 group patients before and after treatment neurological impairment score Improvement Pre-treatment, 2 Neurological symptoms of a group of patients, Signs and ADL for score Compare, No difference no statistically significant (P>0.05). rule cure, 2 group patients above are better than before treatment, The difference has a unified accrual significance (P<0.05). after treatment, Treatment Group improvements above degree is better than control group, difference has statistically significant (P<0.05).

2.3 2 group patients before and after treatment enmgCheck Results compare treatment before, 2 Group patients enmgCheck results show varying degrees of neurogenic damage, The is mainly performed by the median nerve and the ulnar nerve MDL Extend, SCV slows down, MCV slows down, Common peroneal nerves MDL Extend, MCV slows down, and sural nerves SCV slows down. before treatment, 2 Group patients item enmgIndex comparison, differences are not statistically significant (P>0.05). Compare to same group before treatment, after treatment 2 Group patient Items enmg metrics are improved, differences are statistically significant (P<0.05), treatment group patients after treatment enmg Index improvement is better than the treatment control group, differences are statistically significant (P<0.05). See table 2, 3.

2.4 Lab Check Results 2 the three major before and after treatment in the group, liver function, kidney function, myocardial enzymes, electrolyte and electrocardiogram check knot HasNo significant exception. Note: with 1 value, T2/Z3, P2 value, 3 value, 4 value, values are related to indicators before treatment 2 Group Comparison, compare before and after treatment in a control group, compare before and after treatment in a group of treatment groups, after treatment 2 Group Compare statistical analysis results.

Note: /1, Corpse1 value, Z2, P value^2, 3 value, 4 value^3, values are related to indicators before treatment 2 Group Comparison, compare before and after treatment in a control group, compare before and after treatment in a group of treatment groups, governs after 2 Group Comparison statistical analysis results.

2.5 Clinical Safety assessment for all patients, has 8 Example due to intramuscular injection firemg with local pain, 4 Example Induration, instruct the patient in the muscle post-injection site and symptom relief after hot compress, no Shadowing treatment; The rest of the patients did not appear to have any adverse use the process response.

2.6 2 Group patients in hospital time comparison treatment, 2 group patients are probed cured from discharge, control group, treatment group patients were hospitalized for a period of 3 ± 5.5 and -5 (one.3 ± 4.3) month, treatment group average hospitalization time lower than control group. Difference statistics meaning (t = -2.039, P = 0.04). Treatment group patients average hospitalization time less than control group 2 Month.

3. Discussion

The pathogenesis of occupational chronic N-hexane intoxication is still not fully clear. The current view of axonal swelling and axonal degeneration in N-hexane toxicity Week Peripheral neuropathy Signature damage. The primary clinical manifestation is four The distal end of the limb for the bilateral symmetry feel abnormal or
neurological damage Changes,With severity of illness degree parallel, is the gold standard for diagnosing chronic n-hexane poisoning.ClinicN-hexane poisoning No effect treatment drugs, The main use of the general treatment is B vitamin and their compound vitamin preparations, inosine, three adenosine triphosphate, Auxiliary Enzymes A, Salvia miltiorrhiza and other nutritional nerve and improve microcirculation treatment. General Treatment Although the patient is completely cured, But patient recovery slow, duration longer. Recent scholars study on the basis of general treatment, take the MNGF, Acupuncture, Physical Therapy, Herbal Fumigation and rehabilitation synthesis treatment etc where 1, one or more ways to treat chronic n-hexane poisoning, the take have effect, but not see about union adoption B family Dimension vegetarian, activating blood stasis, mngf, [acupuncture], Physical Therapy, Chinese herbal fumigation and Treatment of chronic N-hexane poisoning by integrated Chinese and Western medicine combined with rehabilitation therapy.

nerve growth factor (nerve growth factor, NGF) double neurotrophic Factor and promoting the dual role of nerve growth factor protein, Development of central and peripheral neurons, split, grow, and then the expression of both the health and feature features has important regulatory effects, for normal Cell Nutrition effect 1-3. A research shows, hexane contact people and poisoned patients serum NGF water average drop, considers positive The Pathogenesis of toxic peripheral neuropathy in hexane may be related to n-hexane-Dry disturbance NGF signal transduction path about 4-6. So, research NGF effect and scheme of treating occupational chronic N-hexane poisoning hot. Huang Hanlin wait Mat Random, double blind, Placebo Control (only gives Oral vitamins B1 and intramuscular injection of vitamins B2) on the basis of, view observe add MNGF (i ^ gintramuscular injection, 1t times/Mountain Total 8 week) governs treatment of patients with occupational chronic n-hexane intoxication a satisfactory outcome. Hu Zhi soldiers etc. M report in control group patients with supplemental vitamins, improving micro-following, Dilation of peripheral blood vessels and physical therapy as occupational chronic positive self on the basis of conventional treatment of alkane poisoning, treatment group patients plus mngf (+ net intramuscular injection, 1 Times/Mountain Total 8D), also achieve better results. Liu Yang on occupational chronic N-hexane poisoning control group Vegetarian B1 and three adenosine triphosphate, intramuscular injection of vitamins B2, with cobalt-amineon the basis of, treatment group patients plus mngf (inet intramuscular injection, 1t times/D) and Dan seven soft capsules, Treatment3 months after a better effect, so, MNGF can be an important nutritional neurological drug for the treatment of the disease. addition, Acupuncture, Physical Therapy, Chinese herbal fumigation and rehabilitation exercise for treatment Multiple peripheral neuropathy has Set Advantage, improving around good has a good effect on symptoms 122-26, from Chinese Medicine dialectic angle degree, Peripheral Neuropathy is a syndrome, bi-syndrome 122-23, due to external invasion, blood and qi obstruction, causing limb numbness, Pain. Research considers, point pinsmoxibustion can significantly relieve the pain of patients with peripheral neuropathy caused by N-hexane poisoning pain, narrowing the range of sensory barriers. Repairing neurological Functions, To promote blood circulation through & 60. Acupuncture-Yang-ming meridian three-li, Curved Pool, Hegu, can invigorate the spleen gas, removing blood stasis; Acupuncture three-yin sex, too Creek blood transport, kidney anion Its this; Toreduce platelet aggregation, reduce blood viscosity, Improve blood flow throughring, provide adequate energy for regeneration and repair of peripheral nerves 128. same as when, Acupuncture also helps improve autonomic function, make patient limbout cool, numbness pain symptoms all reduced.

limb paralysis can occur due to chronic n-hexane poisoning, Nor method standon, life out of the way, as small number of the muscle atrophy of the muscle or the palmar musclenad so on. Part of heavy recovery is very slow, even need2 year About Time, Psychology of patients and even their families, life causes serious affect, lower quality of life, so, for patients with this type of poisoning should be early period, Early diagnostics, Early adoption of scientific Chinese and Western medicine treatment, To improve the prognosis.

References


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