Clinical Report 1 (Japan)

A Case Report on Acupuncture Treatment for "Complex Regional Pain Syndrome (CRPS)"

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Introduction

Chronic pain, edema, skin temperature anomalies, sweating and other symptoms are associated with the refractory and chronic pain of complex regional pain syndrome (CRPS) that may be triggered with surgeries or injuries. CRPS was once called reflex sympathetic dystrophy (RSD) or causalgia. Its morbidity is approximately 5 in 100,000 people and is therefore a disease of comparatively low incidence. We report a case of acupuncture treatment for a patient who had been diagnosed of RSD.

[Case Report]

Patient: Age 52 years, female.
First visit: March 10, 2008
Chief complaints:
#1 dull pain of the left hand
#2 edema of the left hand, stiffness
#3 irregular symptoms of feeling of sensations of heat in the left hand, cold and sweating
#4 feeling of weakness of the left upper extremity

Present illness:

The patient underwent surgery for left thumb tendosynovitis in June 2007. Following the surgery a tingling sensation of the surgical scar and a feeling of traction gradually developed. Moreover, symptoms of dull pain, a sensation of heat in the left hand, edema, stiffness, a sensation of cold, irregular sweating and a sense of weakness of the left upper extremity developed. Based on the results of a detailed examination performed in a different clinic the physician diagnosed as RSD. From July 2007 to February 2008 left stellate ganglion blocks (SGBs) were performed and resulted in a mild improvement of the symptoms, but now the injection site on the left side of the neck became painful. Concerns about continuous nerve block treatment finally brought the patient to our clinic.

Past history:

In 2004 temporomandibular arthrosis (treated with acupuncture in this acupuncture clinic)

Life style:

Alcohol: moderate amount of beer; tobacco: does not smoke

Family history: nothing particularly noteworthy.

General symptoms: appetite: normal, bowel movements: once a day; sleep: normal; stiffness of the back of the neck; shoulder stiffness, weariness of the muscles around the left temporomandibular joint.

General physical findings: Height: 155 cm; weight: 51 kg; blood pressure: 128/80 mmHg; pulse rate: 56 bpm (regular pulse)

Local physical findings: Jackson and Spurling test (-), TOS tests (-); deep tendon reflexes (+: no left-right differences), pathologic reflexes (-)

Left hand: edema (+), feeling of heat (+), redness (+), muscle atrophy (-), sensation (normal: no left-right differences), nociception (little finger, digital pad: slightly hypersensitive), tenderness (-).

Right hand: Nothing particularly noteworthy.

Subjective symptoms during the night: no nocturnal pain of the left hand. However, there is a sensation of edema.

Subjective symptoms in the morning: stiffness of the left hand.

Comprehension of the pathologic condition:

(1) Following surgery for left thumb tendovaginitis gradual development of dull pain, edema, stiffness, a sensation of heat and cold, irregular sweating and a sense of weakness of the left upper extremity. (2) Findings during the first examination. Based on the above described (1) and (2)the clinical characteristics were considered to match those of a CRPS.

Patient impression obtained during the medical interview: speaks impatiently. Appeared slightly tired.
Informed consent: CRPS is a refractory condition. The therapist had performed acupuncture and moxibustion treatment only once about 4 years ago for a patient with CRPS, but this patient dropped out when the symptoms had improved to about 1/2 of their original intensity. The above described situation was explained to the patient and the acupuncture and moxibustion treatment started after obtaining the patient's consent.

Acupuncture and moxibustion treatment plan: Initially the approach was to gradually apply local stimulation while observing the course. Moreover, we applied acupuncture and moxibustion treatment also for the stiffness from the back of the neck to the shoulders and around the left temporomandibular joint.

Observation plan (evaluation):
Prior to the performance of the SGB treatment the severity of the symptoms of the CRPS was rated on a 10-step Numerical Rating Scale (below called NRS).

➢ The NRS10 for the symptoms (1) - (7) prior to the performance of the SGB treatment:
(1) Edema: the edema is so severe that the patient cannot wear M size rubber gloves
(2) Pain: dull pain (heaviness + pain)
(3) Redness: the entire hand is red
(4) Irregular symptoms of sensations of heat in the left hand, cold and sweating: Depending on the time the patient experienced hot and cold sensations and sweating on an irregular basis.
(5) Stiffness of the left hand. Hand and fingers could not be flexed.
(6) Sense of weakness of the upper extremity: This sensation covered an area from the upper arm to the tip of the fingers.
(7) Numbness: pulling sensation at the site of the surgical incision + numbness

➢ NRS for the acupuncture and moxibustion treatment after the first examination
(1) Edema: NRS 6
(2) Pain: NRS 6
(3) Redness: NRS 6
(4) Irregular symptoms of sensations of heat, cold and sweating: NRS 5
(5) Stiffness of the hand: NRS 7
(6) Sense of weakness of the upper extremity: NRS 7
(7) Numbness: NRS 0

Acupuncture and moxibustion treatment and course (disposable needles, 40 mm, No.1 were used)

➢ **First treatment (March 10, 2008):**
Supine position: GV20 (Hyakue, Baihui), left ST6 (Kyosha, Jiache), left ST7 (Gekan, Xiaguan), left GB3 (Jokan, Shangguan), bilateral LI11 (Kyokuchi, Quchi), bilateral GB34 (Yoryosen, Yanglingquan) - retaining the needles for 10 minutes.
Single insertion at interdigital points (distal). Single needling of interdigital points (proximal) - indirect moxibustion, 5 cones.
Prone position: bilateral GB20 (Fuchi, Fengchi), bilateral GB21 (Kensei, Jianjing), bilateral BL43 (Koko, Gaohuang), bilateralSI10 (Jue, Naoshu) - retaining the needles for 10 minutes. At the same time warming moxibustion on the shoulders (box moxibustion)

➢ Second treatment (March 21, 2008):
On the morning following the treatment the stiffness of the left hand and fingers had decreased. Alleviation of the sense of weakness of the left upper extremity. In addition to the first treatment pressure applied to the left auricle resulted in some alleviation of the ipsilateral arm, so that the posterior part of the auricular was needled. GV20 (Hyakue, Baihui), bilateral LR3 (Taisho, Taichong) retaining the needles for 10 minutes. Left carpal tunnel, Tinel sign (-)

➢ Third treatment (March 31, 2008):
Alleviation of the sense of weakness of the left upper extremity. However, mild pain had developed around the temporomandibular joint. Development of stiffness of the MPs of the left first and fifth fingers. Additional treatment of right ST6 (Kyosha, Jiache), right ST7 (Gekan, Xiaguan), right GB3 (Jokan, Shangguan), retaining the needles for 10 minutes.

➢ Fourth treatment (April 4, 2008):
Following the treatment of pain and stiffness of the MP of the left first and fifth fingers the alleviation of the symptoms continued for 1 week, but after that returned to the original state. Sensation of heat and swelling in the left thenar and hypothenar. Single insertion without retaining the needle into in the left thenar and hypothenar (40 mm, #01). The NRS scores were: (1) edema 6, (2) pain 6, (3) redness 2, (4) irregular symptoms of a sensation of heat, cold and sweating 4, (5) stiffness of hands and fingers 7, (6) weakness of the upper extremity 7, (7) numbness 0.

➢ Sixth treatment (April 25, 2008):
Development of pain near the left sternoclavicular joint, right blepharospasms.

➢ Seventh treatment (May 2, 2008):
No change of the pain near the left sternoclavicular joint. Disappearance of the right blepharospasms.

➢ Ninth treatment (May 16, 2008):
Sneezing has become impossible because of the pain near the left sternoclavicular joint; development of left blepharospasms. Needle retaining at bilateral KI26 (Ikuchu, Yuzhong), CV14 (Koketsu, Juque). Later indirect moxibustion (use of moxibustion paper); 5 cones of half rice grain size.

➢ Tenth treatment (May 26, 2008):
Disappearance of the left blepharospasms. Relief of the pain near the left sternoclavicular joint. Appearance of sneezing and hiccupping.

➢ Twelfth treatment (June 11, 2008):
Irritation by weakness of the left upper extremity and stiffness of hands and fingers.
The NRS scores were: (1) edema 5, (2) pain 5, (3) redness 1, (4) irregular symptoms of a sensation of heat, cold and sweating 2, (5) stiffness of hands and fingers 4, (6) weakness of the upper extremity 5, (7) numbness 0.

➢ Fourteenth treatment (June 27, 2008):
Relief of left chest pain and stiffness.

➢ Fifteenth treatment (July 11, 2008):
General relief of the symptoms.
The NRS scores were: (1) edema 2, (2) pain 2, (3) redness 0, (4) irregular symptoms of a sensation of heat, cold and sweating 1, (5) stiffness of hands and fingers 2, (6) weakness of the upper extremity 5, (7) numbness 0.

➢ Seventeenth treatment (August 8, 2008):
Due to the general relief of the symptoms I planned to extend the treatment intervals to 1 month. For the stiffness of the hands and fingers carpal tunnel needling (single insertion) was added.
The NRS scores were: (1) edema 0, (2) pain 0, (3) redness 0, (4) irregular symptoms of a sensation of heat, cold and sweating 0, (5) stiffness of hands and fingers 1, (6) weakness of the upper extremity 2, (7) numbness 0.

➢ Eighteenth treatment (September 5, 2008):
The previously applied needling of the carpal tunnel seemed to have been effective, since there is almost no stiffness of hands and fingers. The NRS scores were: (1) edema 0, (2) pain 0, (3) redness 0, (4) irregular symptoms of a sensation of heat, cold and sweating 0, (5) stiffness of hands and fingers 0, (6) weakness of the upper extremity 2, (7) numbness 0.

➢ Twentieth treatment (October 31, 2008):
General improvement of all symptoms.
The NRS scores were: (1) edema 0, (2) pain 0, (3) redness 0, (4) irregular symptoms of a sensation of heat, cold and sweating 0, (5) stiffness of hands and fingers 0, (6) weakness of the upper extremity 2, (7) numbness 0.

period of approximately 7 months led to the following improvement of the NRS scores: edema 6→0, pain 6→0, redness 6→0, irregular symptoms of a sensation of heat, cold and sweating 5→0, stiffness of hands and fingers 7→0, weakness of the upper extremity 7→2.
The improvement was maintained by subsequent regular treatments.

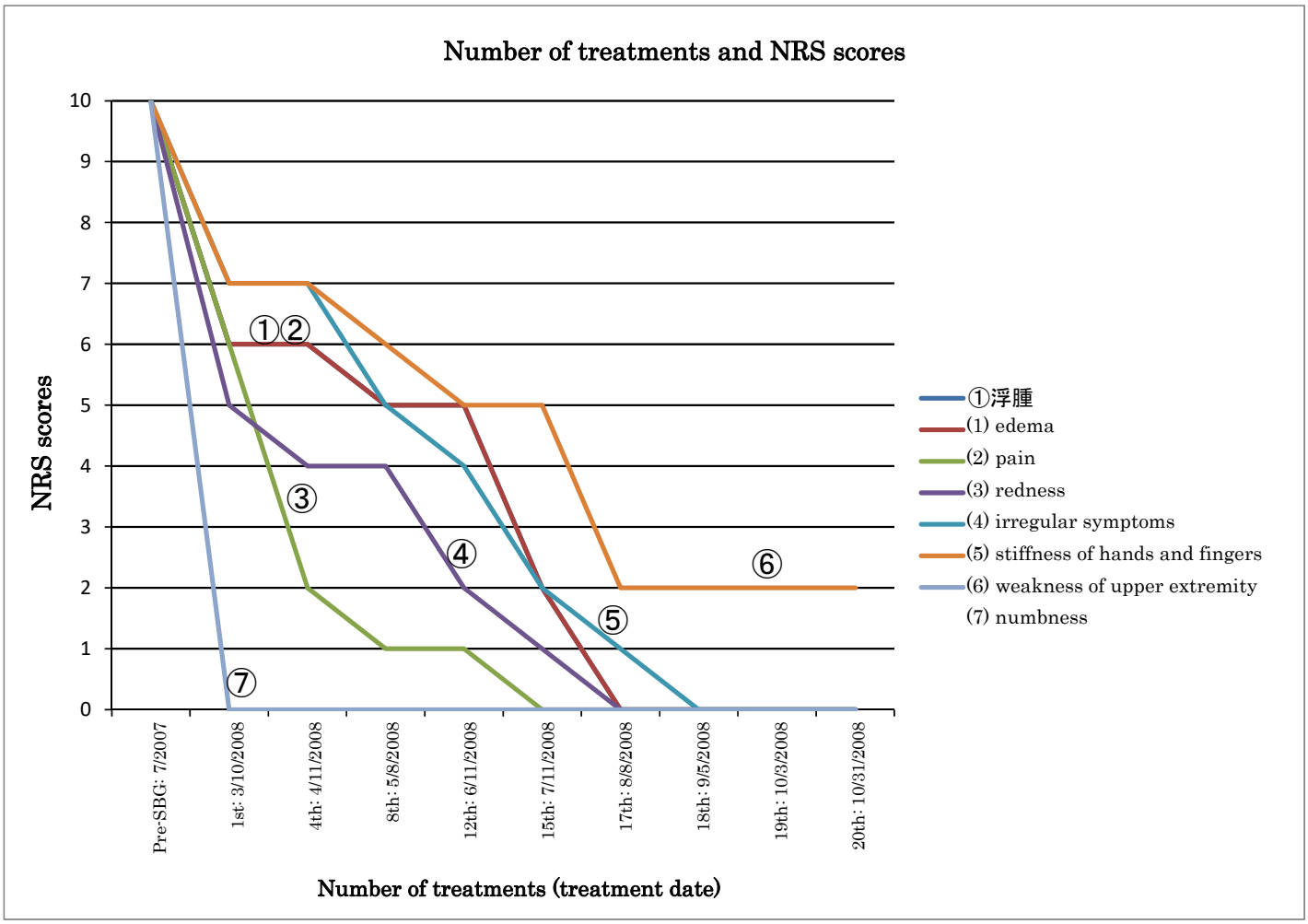

Figure 1: Number of treatments and NRS scores

Number of treatments and NRS scores (Figure 1: Number of treatments and NRS scores)
Shows the improvement of the NRS scores with increasing number of treatments.
A total of 20 treatments administered over a

Discussion

Yoshiki Hamada wrote in his summary of the CRPS seminar held in February 2007 titled "Early Diagnosis of CRPS and Points to Consider":

"The Lankford classification is clinically of extreme importance and an early initiation of treatment of the minor type of the condition may often lead to favorably functional recovery without the development of refractory symptoms".

Table 1shows the Lankford classification. This shows that it classifies the condition into a major and a minor type.

➢ Moreover, in Yoshiki Hamada's summary "Early Diagnosis of CRPS and Points to Consider" it also says:

"Twenty out of 25 patients (80%) for whom the treatment was initiated within 6 months of the onset recovered functions so far, that they were able to return to ordinary daily life within one year, but in 70% of these cases the condition had been classified as minor type."

➢ The Lankford classification includes the items "palpation impossible" for the major type and "palpation possible" for the minor type. The question whether palpation is possible or not is considered to be closely related to the possibility of administering acupuncture treatment.

➢ In this patient the condition was palpable and it is therefore reasonable to think, that a state of hyperaesthesia was present in the area treatable by acupuncture.

Lankford Classification

Clinical form	Symptoms and Sign
Minor traumatic dystrophy	Minor clinical symptoms like pain and swelling. Functional disorders were extremely mild and there was mild allodynia (palpation possible)
Major traumatic dystrophy	There was severe pain, swelling, functional disorder and allodynia (palpation possible)
Minor causalgia	Mild pain, swelling, functional disorder and allodynia (palpation possible)
Major causalgia	Motor- and sensory nerve injury (Michell Causalgia)
Shoulder-Hand syndrome	Shoulder and wrist joint pain secondary to myocardial infarction, swelling etc. CRPS symptoms

The Lankford classification does not describe the degree of allodynia

Conclusion

(I) In this case the clinical condition of the CRPS based on NRS evaluations showed already signs of improvement when the patient first visited this acupuncture clinic. The characteristics of the clinical symptoms of CRPS may vary significantly depending on the disease progression in individual patients. In this case the acupuncture treatment for the various symptoms of this patient with CRPS appeared to have been effective.

(II) CRPS is associated with severe physical and mental stress. Acupuncture treatment seems also to be helpful for secondary symptoms caused by irritation and concerns.

(III) Although this was only one case, this one case gave me the impression, that the concepts pertaining to indications and contraindications of acupuncture treatment for CRPS should be reconsidered.

References

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2) Morimoto M.: "Pain Clinic and Oriental Medicine"; pp 505-512, Shinko Trading Co. Ltd, Publishing Department of Medical Books, 2004

3) Hamada Y.: "Early Diagnosis of CRPS and Points to Consider"; Summary of the CRPS Seminar, 2007

4) Masamo T., Shibata M. editors: "Complex Regional Pain Syndrome (CRPS)"; Shinko Trading Co. Ltd, Publishing Department of Medical Books, 2009

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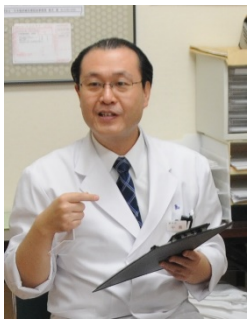

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* Concurrent lecturer in the Department of Acupuncture and Moxibustion of the Morinomiya College of Medical Arts and Science
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  - In charge of: acupuncture and moxibustion diagnostics and therapy I

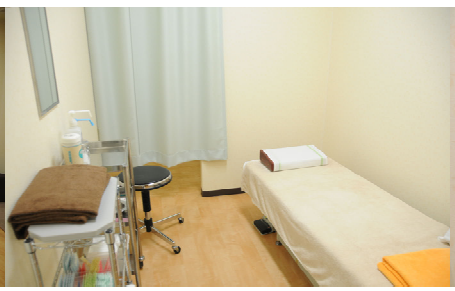
Midori no Kaze Acupuncture Clinic affiliated with the Morinomiya College of Medical Arts and Science / Midori no Kaze Acupuncture Clinic

The clinic affiliated with the Morinomiya College of Medical Arts and Science and the affiliated acupuncture and moxibustion clinic established in 1982 were reopened in January 2010 after moving to the third floor of a new building under the name "Midori no Kaze Acupuncture Clinic / Midori no Kaze Clinic".

The clinic section has the following departments: orthopedics, rehabilitation, internal medicine, Kampo medicine and acupuncture and moxibustion. This facility also focuses on the training of the next generation of medical personnel and has the function of providing opportunities for clinical practice for the students of the Morinomiya College of Medical Arts and Science.

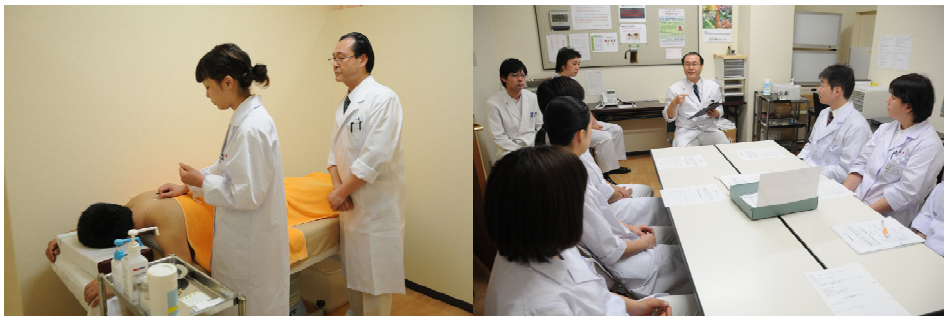
< Midori no Kaze Acupuncture Clinic (3rd Floor) >

Clinic reception



Acupuncture and moxibustion treatment room

Clinic staff



Clinical practice in the department of acupuncture and moxibustion

< Midori no Kaze Clinic (1st Floor) >

Orthopedics

Physician: Yoshio Miyazaki; physician: Takahiro Shintani
Director of the Midori no Kaze Clinic

Internal medicine, Kampo medicine

Professor of the department of health services of the Morinomiya College of Medical Arts and Science

MRI

< Midori no Kaze Clinic (2nd Floor) >

Rehabilitation