



## ACUPUNCTURE AND SELF ACUPRESSURE TREATMENT OF HEMIFACIAL SPASM

### PENGOBATAN HEMISPASIAL SPASM DENGAN AKUPUNKTUR DAN SEL ACUPRESSURE

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#### ABSTRACT

**Background:** Hemifacial spasm (HFS) is a condition of unilateral, involuntary, irregular, spasmodic movements of the face. The condition is most commonly a result of vascular loop compression at the root entry zone of the facial nerve. Patient whose hemifacial spasm with left-sided facial complaints often twitching since 6 months ago. This 69-year-old man with hyperlipidemia and hypertension had diagnosed with hemifacial spasm by neurologist. **Purpose:** To prove the effect of acupuncture on Fengchi (GB 20), Neiguan (PC 6) and Taichong (LR 3) accompanied with acupressure on Taichong (LR 3) and auricular acupressure on the Ear Shenmen point in patient with hemifacial spasm. **Methods:** Handling Hemifacial spasm with acupuncture on Fengchi (GB 20), Neiguan (PC 6) and Taichong (LR 3) with the reducing method and strong stimulation three times a week, acupressure on the Taichong (LR 3) twice a day for 30 times pressure and auricular acupressure on ear Shenmen, twice a day for 5 minutes. **Results:** Biochemical mechanism of acupuncture and acupressure involve the stimulation of acupoint that lead to complex neuro-hormonal response. In handling hemifacial spasm, acupuncture given for 15 times, taken three times a week combined with acupressure and auricular acupressure. This therapy overcome the symptoms of facial twitching in hemifacial spasm. **Conclusion:** Acupuncture combined with acupressure and auricular acupressure can be used to overcome facial twitching in hemifacial spasm.

#### ABSTRAK

**Latar belakang:** Hemifacial Spasme (HFS) adalah gerakan spasmodik wajah pada satu sisi, yang tidak disengaja dan tidak teratur. Kondisi ini paling sering diakibatkan oleh kompresi pembuluh darah di area masuknya akar dari nervus facialis. Pasien dengan hemifacial spasme wajah sisi kiri, sering berkedut sejak 6 bulan yang lalu. Pria 69 tahun ini didiagnosis hemifacial spasme disertai hiperlipidemia dan hipertensi oleh dokter spesialis saraf. **Tujuan:** Untuk membuktikan efek akupunktur pada Fengchi (GB 20), Neiguan (PC 6) dan Taichong (LR 3) serta akupresur pada Taichong (LR 3) dan auricular akupresur di titik Shenmen telinga pada pasien dengan hemifacial spasme. **Metode:** Penanganan hemifacial spasme dengan akupunktur pada Fengchi (GB 20), Neiguan (PC 6) dan Taichong (LR 3) dengan metode sedasi dan stimulasi kuat tiga kali seminggu, akupresur pada Taichong (LR 3) dua kali sehari sebanyak 30 kali tekanan dan auricular akupresur di titik Shenmen telinga dua kali sehari selama 5 menit. **Hasil:** Mekanisme biokimia dari stimulasi akupoin dengan akupunktur dan akupresur melibatkan respon kompleks Neurohormonal. Dalam menangani hemifacial spasme, akupunktur diberikan sebanyak 15 kali, dilakukan tiga kali seminggu dikombinasikan dengan akupresur dan aurikular akupresur.

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Terapi ini dapat mengatasi gejala wajah berkedut pada hemifacial spasme. **Kesimpulan:** Terapi Akupunktur dikombinasikan dengan akupresur dan aurikular akupresur dapat digunakan untuk mengatasi wajah berkedut pada hemifacial spasme.

**Kata kunci:**  
Spasme Hemifasial, Akupunktur, Akupresur, Aurikular Akupresur.

## INTRODUCTION

Hemifacial spasm (HFS) is a condition of unilateral, involuntary, irregular, spasmodic movements of the face. The condition is most commonly a result of vascular loop compression at the root entry zone of the facial nerve. HFS occur in approximately 11 per 100,000 individuals and is more common in middle age, affecting women more often than men. Primary HFS is commonly attributed to vascular loops compressing the seventh cranial nerve at its exit zone from the brainstem. Secondary HFS frequently follows peripheral facial palsy or may arise from facial nerve damage produced by tumors, demyelinating disorders, traumas, and infections. In most cases the compression is from a hardened and/or displaced blood vessel near the base of the brain. The compression then causes an irritation in the nerve, which fires independently. When the nerve fires, the signal is misdirected to other parts of the nerve causing muscle contractions in different areas of the face on the same side (Caetano, 2017).

Acupuncture and acupressure has been used in China for more than 2000 years for the treatment of various kind of diseases and symptoms. Acupuncture (derived from the word *acus*, meaning a sharp point, and *puncture*, meaning to pierce), is defined as "stimulation" of selected point (acupoint) primarily by the use of solid needles or with finger-pressure massage (acupressure). Acupoints are specifically chosen site of acupuncture manipulation.

In acupressure, muscular tension is released by applying pressure with hand at specific acupoints or pressure of the thumbs on specific points or the application of pressure to acupoints is used to balance the flow of the physiological energy (Mehta, 2016)

## CASE REPORT

A 69-year-old male patient with a long history of hyperlipidemia, came to the clinic with left-sided facial complaints often twitching since 6 months ago. The movement starts from the next eye on the cheek and left lips. Patients do not feel dizzy, there is no numbness feeling on the face. When resting or sleeping the facial muscle movements are reduced or lost. If the patient lacks sleep, the symptoms of twitching has gotten worse. The patient already carried out an MRI examination at the district hospital where brain atrophy, cervical degenerative disc disease, white matter change due to degenerative process were found. Patients were diagnosed with hemifacial spasm at the provincial hospital neurologist, and given symptomatic therapy in the form of sedatives and nerve vitamins.

In July 2018 or 6 months after the onset of the first symptom, patients come to our clinic with complaints of twitching of the face that is increasing and consult whether acupuncture can help to overcome the problem. Patients have also been given surgery options by neurologists to handle this case, but the patient refuses to reason for fear of surgery. The patient also reported a coronary heart disorder and had been regularly treated by a cardiologist. When he was young, he had a smoking habit and already stopped now. Patients also suffer from prostate disorders and there is a small kidney stone below 1 cm in the right kidney. Sometimes he has a low back pain.

On examination patient was conscious, walked alone without family, normal limb movements, spoke clearly, and could describe the condition of his illness in detail, speak loudly enough, blood pressure 140/90, pulse 85x per minute. His eyebrows, eyelids, cheeks and left lips sometime twitching while at rest or talking condition. The extremities are flexible, no lateralization is found. Laboratory examination results on July, 2018: Hb 15.1 gr / dl, LED 4 mm / hour, erythrocyte urine 0-1 / lp, SGOT 16U / l, SGPT 15U / l, Cholesterol 216 mg / dl, 148 mg triglycerides / dl, HDL cholesterol 50 mg / dl, LDL cholesterol 150 mg / dl, BUN 11.5 mg / dl, serum creatine 1.17 mg / dl, Uric acid 6 mg / dl. From the results of the examination and clinical findings, the patient can be diagnosed as hemifacial spasm accompanied by hyperlipidemia and hypertension.

We used filiform needle (acupuncture needle) 0,5-1.0 inch for therapy. The patient was placed in the supine position, and the point *Fengchi* (GB 20) on the side of lesion and bilateral *Neiguan* (PC 6), *Taichong* (LR 3) point was used. After disinfection, the needle was quickly pierced to the points and stimulated with the reducing method and strong stimulation. The patients have a light sensation of qi. The needle was withdrawn 20 minutes after the retaining. Acupressure on the *Taichong* (LR 3) acupoint twice a day for 30 times pressure. An auricular seed was used for self pressure on ear *Shenmen*, which was performed at home, twice a day for 5 minutes. Subsequently, acupuncture was performed three times a week, and 15 times constituted a circle. After 5 weeks of treatment, the symptoms were decreased, from 16 times at the beginning of therapy to very rare after several times therapy, only appear in the condition of fatigue or lack of sleep. Blood pressure at the first time of treatment was 140/90 become 125/85 on average. Sleep quality of the patient become better and he felt more refreshed when waking up. The patient end treatment because he will return to his home town. We also recommend that patients do self acupressure at home to maintain the therapeutic effect at *Fengchi* (GB 20), *Neiguan* (PC 6), *Taichong* (LR 3) point.

## DISCUSSION

Acupuncture therapy is a unique therapeutic approach that treats disease by puncturing certain point of the human body called “acupoint” with various type of needles and manipulation. Acupuncture and acupressure share the same active point. The active points are located on imaginary line called meridians. Accordingly, the points are referred to by the meridian they are located on and consecutive number of point on that meridian. Meridian or channels are conduits that carry and distribute *Qi*, or vital energy, throughout the body. Application of pressure or needle at different point cause different effect and stimulating these points can correct imbalance *Qi* through channel and subsequently treat the disease.

Biochemical mechanism of acupuncture and acupressure involve the stimulation of acupoint that lead to complex neuro-hormonal response. It may have regulatory effect on various function, including mood and motivation, autonomic effects, the hypothalamo-pituitary-adrenal axis cause relaxation response.

Acupressure belongs to the Traditional Chinese Medicine (TCM) as components of alternative treatments. It was defined as a technique which applies pressure on acupoints on the human body by using finger, palms or other devices to balance the vital energy flows called *qi* through meridians (Gong, 2017).

Acupressure helps to decrease tissue adhesion, promote relaxation and regional blood circulation, increase parasympathetic nerves activity and intramuscular temperature along with reduction in neuromuscular excitability. Auricular acupressure is used in the treatment and prevention of disease by stimulating certain point on the auricle with hand pressure or other device. This therapy characterizes by easy manipulation, broad indication, and few side effects, economical and good results (Mehta, 2017)

In the theory of acupuncture, Gall bladder channel originated from outer canthus (*Tongziliao*, GB 1), ascend to the corner of the forehead, then curved downward to the retroauricular region *Fengchi* (GB 20). The branch arising from the outer canthus run downward to *Daying* (ST 5), meets the *Sanjiao* Channel in the infraorbital region, then passing through *Jiache* (ST 6), descend to the neck and enter the supraclavicular fossa to meet the main channel. It can be seen from it that the circulation sites of the gallbladder meridian include the position of facial muscles, so gallbladder meridian can be used to treat facial muscle diseases (Zhou, 2017). *Neiguan* (PC 6) is a pericardium meridian point and can be used for strengthening the heart function of controlling mental and emotional activities. *Taichong* (LR 3), the *Yuan* (Source) point of the liver meridian, can be used for regulating the circulation of *qi*. Acupressure on the *Taichong* (GB 20) acupoint twice a day for 30 times pressure could lower systolic and diastolic BP in patients with hypertension (Lin, 2016), so that it can provide benefits to relieve symptoms and prevent the increase

in the severity of the disease.

The present case report is suggestive that acupuncture and self acupressure may provide a valuable, effective approach for the treatment of hemifacial spasm. Since this is a single case report and not well designed studies regarding acupuncture and self acupressure use for hemifacial spasm, the approach described herein is not a generalized treatment for all cases of hemifacial spasm, but it is one of the therapeutic options for the patient that afraid of drugs, Botox injection and nerve decompression complication. Deduction in acupuncture point selection and larger controlled studies are needed to determine the effectiveness of acupuncture and self acupressure in the treatment of hemifacial spasm.

## CONCLUSIONS

Acupuncture on *Fengchi* (GB 20), *Neiguan* (PC 6) and *Taichong* (LR 3) accompanied with acupressure on *Taichong* LR3 and auricular acupressure on the Ear Shenmen point and may provide a valuable, effective approach for the treatment of hemifacial spasm.

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