

Case Report

The clinical effect of Embedding Therapy for Ramsay Hunt syndrome

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Objectives: The purpose of this study is to evaluate the clinical effects of Embedding Therapy for Ramsay Hunt syndrome.

Methods: 5 patients with Ramsay Hunt syndrome were treated with Embedding therapy. It was performed once a day, once a week. 15~20 Embedding threads were used in each Embedding treatment. The total number of Embedding therapy treatments was 4 or 8. To evaluate the effects of Embedding therapy, we analyzed Yanagihara's score and House-Brackmann scale

Results: In case 1, After treatment the Yanagihara's score was changed from 3 to 7 and the House-Brackmann scale was changed from VI to V.

In case 2, After treatment the Yanagihara's score was changed from 12 to 33 and the House-Brackmann scale was changed from IV to I.

In case 3, After treatment the Yanagihara's score was changed from 3 to 9 and the House-Brackmann scale was changed from VI to V.

In case 4, After treatment the Yanagihara's score was changed from 22 to 32 and the House-Brackmann scale was changed from III to I.

In case 5, After treatment the Yanagihara's score was changed from 23 to 37 and the House-Brackmann scale was changed from III to I.

Conclusion: Embedding Therapy is effective for improve the symptoms of Ramsay Hunt syndrom. Therefore, it will be used to treat Ramsay Hunt syndrome.

Key Words : Ramsay Hunt syndrome, Embedding Therapy, Facial palsy, Bell's palsy

Introduction

Ramsay Hunt syndrome is a viral disease accompanied with a shingles rash, ear pain and facial paralysis¹⁾. The virus is mainly involved with geniculate ganglion but it rarely may affect auditory nerve, trigeminal nerve and IX, X, XI, XII cranial nerve. Thereby it can be symptoms of hypacusis,

tinnitus, dizziness and trigeminal neuralgia²⁾. In general, the prognosis of Ramsay Hunt syndrome is not good as compared to the Bell's palsy³⁾. According to previous studies, the start of treatment has a significant effect on this disease recovery. Patients who treated early stage received a better remedial value than other patients⁴⁾.

In Korean medicine, acupuncture, herbal medicine,

• Received : 23 May 2016 • Revised : 24 June 2016 • Accepted : 24 June 2016
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physical therapy and taping therapy have been performed at Ramsay Hunt syndrome⁵⁾. In Korean medicine, Ramsay Hunt syndrome is within the scope of facial palsy. Various treatments have been attempted additionally, such as Hominis Placenta pharmacopuncture⁶⁾, electropuncture⁷⁾, scalp acupuncture therapy⁸⁾, moxibustion⁹⁾ and Bee-Venom acupuncture¹⁰⁾. Recently, studies about embedding therapy have been reported with facial palsy^{11,12)}. But various studies on the Ramsay Hunt syndrome treatment is insufficient.

Embedding Therapy is also known as Meridian point burial therapy or Medication thread burial therapy. The principle of this treatment that medication thread continue remain to under the skin so the effect lasts longer⁵⁾. Therefore, It is widely used from the beginning to the end stage of the facial palsy.

Kang's Embedding therapy study¹¹⁾ was about sequela of facial palsy with one month later after onset, Han¹³⁾ reported the efficacy of Embedding therapy to facial palsy within one month after onset and Lee's Embedding therapy study¹²⁾ was about sequela of facial palsy with three months later after onset. But no study about Embedding therapy for Ramsay Hunt syndrome has ever been reported.

Ramsay Hunt syndrome is known that it is more difficult to recover than compared to Bell's palsy³⁾. Some patients suffered from complete facial palsy and severe facial or ear pain. Accordingly, we carried out Embedding therapy to Ramsay Hunt syndrome and report the results.

Subject and Method

1. Subject

The research involved 5 patients who hospitalized at the acupuncture & moxibustion department of Semyung University Korean Medicine Hospital for Ramsay Hunt syndrome treatment from February 1,

2014 to December 31, 2014. They were diagnosed with Ramsay Hunt syndrome and they were treated at the Western medicine for initial treatment. they had no abnormalities with the brain CT or MRI. Purpose of the study, procedures and adverse reactions were explained enough to participants and all participants agreed to voluntarily participated.

Exclusion Criteria included the following:

- (1) In association other disease showed up on the X-ray, CT or MRI.
- (2) Patients with keloid, allergen or sensitive skin.
- (3) Getting a skin laser treatment or going to be
- (4) Patients with skin infections.
- (5) Other patient that doctor determines not suitable for this study

2. Treatment Method

1) Embedding therapy

Medical thread for Embedding therapy were purchased from Dongbangchimgusa(Korea). The specifications of the used medical thread is 3cm, 29Gauge generalized smooth form. The medical procedure areas were based on the Park's¹⁴⁾ and Kim's¹⁵⁾ study. Frontalis muscle including the Yangbaek(GB14), Orbicularis oculi muscle, Levator labii superioris muscle, Zygomatic major muscle and Zygomatic minor including the Georyo (ST3), Jichang(ST4), Masseter muscle, Buccinator muscle including the Hyeopgeo (ST6) and Orbicularis Oris muscle are selected. Medical embedding thread was inserted in the same direction as the direction of muscle fiber in Frontalis muscle, Orbicularis oculi muscle, Levator labii superioris muscle, Zygomatic major muscle and Zygomatic minor and Orbicularis Oris muscle. Medical embedding thread was inserted in the vertical direction as the direction of muscle fiber in Masseter muscle and Buccinator muscle. All medical embedding were inserted outward from the facial center line and upward from below.

Embedding therapy was performed once a day,

once a week. 15~20 Embedding thread were used in one time Embedding therapy. The number of medical embedding threads is different depending on degree of symptoms. The total number of Embedding therapy was 4 or 8 depending on the condition of the patient.

2) Acupuncture treatment

The acupuncture were disposable, stainless-steel filiform needles (0.30 mm x 40 mm) from Dongbang Acupuncture, Inc. Following the meridian points, the acupuncture was operated at the Yepung(TE17), Gakson(TE20), Nosik(TE19), Gyeonjeong (GB21) of the affected side before Embedding therapy. The acupuncture's retaining times were 15 min.

3) Herbal medicine

Patients were taking the herbal medicine three times a day. The first week after admission were taking the ligigeopoongsan. Then for three weeks, patients were taking the Bogigeopoongsan. Starting five weeks were taking the Boheotang. Prescription medications were little different according to the characteristics of the patient.

3. Investigation analytical method

In order to the general characteristics of patients and the effects of Embedding therapy, we investigated Yanagihara's score¹⁶⁾ of five rating before and after treatment, 6) House-Brackmann scale¹⁷⁾ before and after treatment,

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Case 1

1. Name : Lee OO
2. Sex/Age : M/63
3. Chief complain and current medical history
He complained Rt. facial palsy, Ear pain. He was a farmer. At that time of onset, he was exhausted

by excessive farming. Patients visits a nearby hospital as soon as the disease outbreak. He was diagnosed as a Ramsay Hunt syndrome and prescribed the drugs. However, the disease was gradually progress and facial palsy was carried out to complete grade in two days. We could hardly observe facial muscle movement of the patient when he first visited our hospital.

4. Onset: 2014. 2. 24
5. Hospitalization period
2014. 2. 26 – 2014. 4. 4
6. Past medical history
He has no special medical history.
7. Family's medical history
He has no special family's medical history.
8. Change of Yanagihara's score
After treatment in case 1 the Yanagihara's score was changed from 3 to 7.(Table. 1.)

Date	3/9	3/16	3/23	3/30
score	3	4	6	7

9. Change of House-Brackmann scale
After treatment in case 1 the House-Brackmann scale was changed from VI to V.(Table. 2.)

Date	3/9	3/16	3/23	3/30
scale	VI	VI	V	V

Case 2

1. Name : Wang OO
2. Sex/Age : F/79
3. Chief complain and current medical history
She complained Rt. facial palsy. The disease occurs without special motivation. Patients visits a nearby ear-nose-and-throat hospital as soon as the disease outbreak. She was diagnosed as a Ramsay Hunt syndrome and prescribed the drugs. However, the disease was gradually progress even the day. She was admitted immediately to the western medical hospital for 10 days. She received physical therapy and medications during hospitalization. Her symptoms during hospitalization

were not substantially improved. We could observe weak facial muscle movement of the patient when she first visited our hospital.

4. Onset: 2014. 5. 29

5. Hospitalization period

2014. 6. 9 – 2014. 7. 2

6. Past medical history

She underwent surgery for uterine cancer in 1994. For the past thirty years she takes medicine to lower hypertension.

7. Family's medical history

She has no special family's medical history.

8. Change of Yanagihara's score

After treatment in case 2 the Yanagihara's score was changed from 12 to 33. (Table. 3.)

Date	6/10	6/17	6/24	7/1
score	12	22	28	33

9. Change of House-Brackmann scale

After treatment in case 2 the House-Brackmann scale was changed from IV to I.(Table. 4.)

Date	6/10	6/17	6/24	7/1
scale	IV	III	II	I

Case 3

1. Name : Lee OO

2. Sex/Age : M/19

3. Chief complain and current medical history

He complained Rt. facial palsy, Ear and facial pain, headache. He was a college student. At that time of onset, he was exhausted by excessive studying. Patients visits a nearby Korean clinic as soon as the disease outbreak. Korean medical doctor was invited to visit the hospital for more precise diagnosis. The disease was gradually progress and facial palsy was carried out to complete grade in four days. He visited the western medical hospital after five days from onset. He was diagnosed as a Ramsay Hunt syndrome and prescribed the drugs. We could hardly observe facial muscle movement of the

patient when he first visited our hospital.

4. Onset: 2014. 7. 11

5. Hospitalization period

2014. 7. 18 – 2014. 9. 5

6. Past medical history

He has no special medical history.

7. Family's medical history

He has no special family's medical history.

8. Change of Yanagihara's score

After treatment in case 3 the Yanagihara's score was changed from 3 to 9.(Table. 5.)

Date	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9
score	3	3	7	7	7	9	9	9

9. Change of House-Brackmann scale

After treatment in case 3 the House-Brackmann scale was changed from VI to V.(Table. 6.)

Date	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9
scale	VI	VI	V	V	V	V	V	V

Case 4

1. Name : Sim OO

2. Sex/Age : F/63

3. Chief complain and current medical history

She complained Lt. facial palsy. The disease occurs no special motivation. Patients visits a nearby ear-nose-and-throat clinic as soon as the disease outbreak. She was diagnosed as a Ramsay Hunt syndrome and prescribed the drugs. However, the disease was gradually progress. She was admitted to the western medical hospital for a month. She received physical therapy and medications during hospitalization. Her symptoms had improved a little during hospitalization. She had continued therapy in outpatient department after discharge for 5 month but the symptoms did not change. We could observe facial muscle movement of the patient when she first visited our hospital but the move was incomplete state.

4. Onset: 2014. 1. 16

5. Hospitalization period

2014. 8. 28 – 2014. 10. 8

6. Past medical history

She underwent surgery for chronic degenerative arthritis of both knee in 2012.

7. Family's medical history

Her mother was diagnosed cerebral infarction.

8. Change of Yanagihara's score

After treatment in case 4 the Yanagihara's score was changed from 22 to 32.(Table. 7.)

Date	9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28
score	22	22	24	27	28	30	32	32

9. Change of House-Brackmann scale

After treatment in case 4 the House-Brackmann scale was changed from III to I.(Table. 8.)

Date	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9
scale	III	III	III	II	II	II	I	I

Case 5

1. Name : Kim OO

2. Sex/Age : F/72

3. Chief complain and current medical history

She complained Rt. facial palsy. The disease occurs no special motivation. Patients visits a nearby Korean clinic as soon as the disease outbreak. However, the symptoms was little change. She visited the western medical hospital She was diagnosed as a Ramsay Hunt syndrome and prescribed the drugs. She visited our hospital to receive Korean medical treatment. We could observe weak facial muscle movement of the patient when she first visited our hospital.

4. Onset: 2014. 11. 17

5. Hospitalization period

2014. 11. 19 – 2014. 12. 19

6. Past medical history

She underwent surgery for uterine myoma in 1974. For the past thirty years she takes medicine to lower hypertension and hyperglycemia.

7. Family's medical history

Her brother died of complications from diabetes

8. Change of Yanagihara's score

After treatment in case 2 the Yanagihara's score was changed from 23 to 37.(Table. 9.)

Date	11/24	12/1	12/8	12/15
score	23	26	34	37

9. Change of House-Brackmann scale

After treatment in case 2 the House-Brackmann scale was changed from III to I.(Table. 10.)

Date	11/24	12/1	12/8	12/15
scale	III	III	II	I

Discussion

Ramsay Hunt syndrome and Bell's palsy both show symptoms of facial paralysis. Both are called Guanwasa in Korean medicine. The facial nerve is the seventh cranial nerve. It controls the same side of the face muscles. It related to taste, tears and saliva secretion, but it consists mostly of motor nerve fibers¹⁵⁾. So patients undergoes a facial movement disorder.

Embedding Therapy is to be embedded melting thread by using a specially designed apparatus. That melting thread also used as the material for surgical sutures for surgery¹⁸⁾.

Embedding Therapy has the principle that analogous to placing acupuncture for a period of times. It can make consistently effect on acupuncture points until melt away¹⁹⁾.

Medication thread to stay under the skin and it cause of stimulate the resisting power. It widely used in chronic diseases, musculoskeletal disorders, dermatology disorders and gynecological disorders in korean medicine¹⁴⁾.

In recent years Embedding therapy has been used in the field of plastic surgery. In Hong's study explains the principles of treatment¹⁹⁾ and in other studies research on its effectiveness²⁰⁾. Embedding

therapy is mainly used in the field of facial plastic²¹⁾. In the same vein, researches have been reported about facial paralysis.

In Park's study¹⁴⁾, Embedding Therapy can be used in facial paralysis. In addition, Kang's¹¹⁾ study, Lee's¹²⁾ study, Hong's¹⁹⁾ study and Han's¹³⁾ study has proceed in clinical research.

Depending on the results of previous research, we tried to improve symptoms of Ramsay Hunt syndrome through treatment with Embedding Therapy.

The purpose of Embedding therapy on facial palsy is to restore of facial movement, prevention of strain and promote of nerve regeneration. Scale that can accurately grasp the degree of paralysis in order to objectively evaluate the effect of treatment is necessary. Yanagihara's score and House-Brackmann scale are most often used for evaluate of facial palsy²²⁾.

In case 1, His symptoms were rapidly deteriorating. Symptoms took only two days to reach complete facial palsy. During hospitalization in our hospital the symptoms are hardly improving. After treatment the Yanagihara's score was changed from 3 to 7 and the House-Brackmann scale was changed from VI to V.

In case 2, She was hospitalized in western medical hospital as soon as occur symptoms. Her symptoms are stopped in House-Brackmann scale IV. Symptom changes were weak during first hospitalization. In parallel to the Embedding Therapy the symptoms were greatly improved. After treatment the Yanagihara's score was changed from 12 to 33 and the House-Brackmann scale was changed from IV to I.

In case 3, He almost did not get treatment nearly 5 days after onset. Meanwhile symptoms become very severe. His symptoms are reached in House-Brackmann scale VI. During hospitalization in our hospital the symptoms have been a little better. After treatment the Yanagihara's score was changed from 3 to 9 and the House-Brackmann scale was changed

from VI to V.

In case 4, She visited our hospital seven months later from outbreak. Her symptoms are stopped in House-Brackmann scale III. There was little change in symptoms for six months. In parallel to the Embedding Therapy the symptoms were improved. After treatment the Yanagihara's score was changed from 22 to 32 and the House-Brackmann scale was changed from III to I.

In case 5, She immediately begin treatment and symptoms did not fast progresses. Her symptoms are stopped in House-Brackmann scale III. In parallel to the Embedding Therapy the symptoms were greatly improved. After treatment the Yanagihara's score was changed from 23 to 37 and the House-Brackmann scale was changed from III to I.

Although the number of cases in this study is too small, most of the cases have high therapeutic effects as compared to the previous studies. In Kim's study, the average score changes of Yanagihara's score for two weeks is about five²³⁾. In this case, the average score changes of Yanagihara's score for two weeks is about seven. However this study included relatively a few cases, so the statistical analysis was difficult. There were no side effects after treatment, the patients were satisfied with the treatment. Judging from the results of this study, Embedding therapy about Ramsay Hunt syndrome may be a effective way and we hope that futher studies about Ramsay Hunt syndrome and Embedding therapy will be performed. This study will have the sufficient meanings as prior materials for further research on Embedding therapy about Ramsay Hunt syndrome.

Conclusion

Through our research, we obtained the following conclusions. In this case study, we have found that the Embedding therapy is to change the Yanagihara's score and House-Brackmann scale on Ramsay Hunt syndrome. The symptoms of all patients were

improved. But the therapeutic effect was better about patients which have milder symptoms. Embedding therapy can be used as a treatment related to Ramsay Hunt syndrome. And it is worth to study in further research.

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