



A Case Study of *Suttigai* (Thermal Cauterization) in the Management of *Mugavatham* (Bell's Palsy)

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Abstract

Bell's palsy (*Mugavatham*) is a unilateral lower motor neuron facial paralysis of acute onset. *Suttigai* (Thermal cauterization) provides prompt relief. This study aims to establish the efficacy of *Suttigai* therapy in the management of *Mugavatham*. A 35-year-old male patient diagnosed with right-sided facial paralysis was treated with *Suttigai* therapy. The "House and Breckmann" assessment scale was used to evaluate the case. After the *Suttigai* therapy, the scale rating improved from grade IV to grade I. The asymmetry of the face and the motor functions significantly improved as a result. The efficacy of *Suttigai* treatment for the management of *Mugavatham* is successful with immediate relief. Hence more and more efforts are needed to optimize the treatment and utilization of *Suttigai* therapy in the management of *Mugavatham*.

Keywords: Copper Probe, *Mugavatham*, *Suttigai*, Siddha System, Thermal Cauterization

1. Introduction

Bell's palsy is the most common unilateral and quick-onset peripheral paralysis of the seventh cranial nerve. Bell's palsy could be caused by immune, infectious, or ischaemic causes, although the exact mechanism is yet unknown¹. The two primary current hypotheses for the etiology of facial nerve palsy are either a cell-mediated autoimmune inflammatory response or the reactivation of Herpes Simplex Virus infection (HSV type 1)^{2,3}. Bell's Palsy (BP) has an annual incidence of 15 to 20 per 100,000 people, 40,000 new cases per year, and a lifetime risk of 1 in 60⁴. The recurrence rate ranges from 8% to 12%. 70% of patients will achieve full recovery even without treatment. Palsy can strike anyone at any age, regardless of race or gender, but the majority of cases occur in middle and later life, with a median onset age of 40⁵. A sudden onset of weakness or paralysis on one side of the face is a feature of Bell's palsy. These symptoms may include minor

pain in the ear or behind the ear, oropharyngeal or facial numbness, decreased tolerance to normal noise levels, altered taste on the anterior part of the tongue, drooping of the eyelid and corner of the mouth, dryness of the eye or mouth, excessive tearing in one eye⁶.

According to Siddha classics, this ailment is associated with *Mugavatham*. It is one of the *Vadha* diseases. In *Yugi Vaidhya Chinthamani*, the etiology of *Mugavatham* includes consumption of bitter, astringent, and pungent foods in excess, consumption of previously cooked foods, drinking polluted water, altered sleep rhythm, living in chill environments, excessive consumption of tubers, fruits, curd etc⁷. Primary humour affected in *mugavatham* is *Vatham* and Secondary humour affected is *Kabam*.

Suttigai is one of the external therapy in the Siddha system⁸. Thermal cauterization, also known as *suttas*, is the process of treating diseases by destroying tissue with a hot instrument. Diseases related to *Vatham* and *Kabam* are treated with *suttigai*⁹. There is a lower rate

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of recurrence, and the *Suttigai* is a superior operation in terms of effectiveness.

Uloga suttigai (Metal cauterization) is indicated for *Mugavatham*¹⁰. Hence considering the above facts this study was conducted to evaluate the effect of *Suttigai* in the management of Bell's palsy.

2. Patient Information

A 35-year old male, belonging to the middle class visited the National Institute of Siddha Pura Maruthuvam department OPD with complaints of sudden onset of deviation of the mouth towards the left side and difficulty in closing the right eye for 15 days. He had a history of excessive exposure to the wind before manifestation. Started with watering of the eyes with mild swelling in the lower lid of the right eye. He consulted Ophthalmologists for the same and was prescribed eye drops. No remission in symptoms was seen. After a week, while waking up in the morning, he had sudden onset of deviation of mouth and weakness on the right side. Followed by the inactivity of eyelid movement and difficulty in speech. There was a previous history of similar symptoms 6 years ago on the left side of his face, and for that, he took 2 years of allopathic treatment and got complete relief. As the patient was not willing to take corticosteroids, he reported at NIS Pura Maruthuvam OPD for management. The case was clinically diagnosed as Bell's Palsy/*mugavatham*.

3. Clinical Findings

The patient complained of deviation of the mouth towards the left side, difficulty closing the right eyelid, tearing, inability to furrow an eyebrow, difficulty in chewing food, loss of taste, and impaired speech for 15 days. Based on clinical findings, and Siddha assessment, *envagai thervu-Naadi* (pulse) 2. *Sparisam* (palpation) 3. *Naa* (tongue examination) 4. *Niram* (colour of the body) 5. *Mozhi* (speech) 6. *Vizhi* (eye examination) 7. *Malam* (stool examination) 8. *Moothiram* (urine examination), he is diagnosed with *Mugavatham*. The vital signs were normal.

4. Diagnostic Assessments

The House-Brackmann Facial Nerve Grading System is used for the assessment of the degree of facial nerve weakness¹¹. This grading system goes from a grade of I (no weakness) to VI (complete weakness). It is represented in Table 1. The H-B gradation was found to be grade 4 at the time of the initial assessment. The assessment was carried out before treatment, after *Suttigai* first sitting, 7th day, and after a month. On clinical examination of the facial nerve, asymmetrical wrinkling of the forehead is seen, while clenching the teeth asymmetry of the face is seen. The patient cannot close his right eye completely. Blowing of cheeks is not possible. While examining the sensory systems, taste sensation in the anterior 2/3rd is absent, corneal reflex in the right eye is absent, Glabellar tap is positive and Bell's phenomenon is observed over the right eye. With the above assessments, the patient is diagnosed and *Suttigai* therapy is chosen as the primary treatment modality.

5. Therapeutic Intervention

5.1 External Therapy

Suttigai procedure

5.2 Type

Uloga suttigai

5.3 Instrument Used

Copper probe

5.4 Site of *Suttigai*

Behind the ear and affected side of the face.

5.5 The Number of Sitzings

1 sitting

Table 1. House and Breckmann scale

Grade	Clinical features	Characteristics
Grade I	Normal	Normal facial function in all areas
Grade II	Mild dysfunction	Gross Slight weakness noticeable on close inspection May have slight synkinesis At rest, normal symmetry and tone Motion Forehead - Moderate to good function Eye - Complete closure with minimal effort Mouth - Slight asymmetry
Grade III	Moderate dysfunction	Gross Obvious but the not disfiguring differences between the sides Noticeable (but not severe) synkinesis, contracture, or hemifacial spasm At rest, normal symmetry and tone Motion Forehead - Slight to moderate movement Eye - Complete closure with effort Mouth - Slightly weak with maximum effort
Grade IV	Moderately severe dysfunction	Gross Obvious weakness and/or disfiguring asymmetry At rest, normal symmetry and tone Motion Forehead - None Eye - Incomplete closure Mouth - Asymmetrical with maximum effort
Grade V	Severe dysfunction	Gross Only barely perceptible motion At rest, asymmetry Motion Forehead - None Eye - Incomplete closure Mouth - Slight movement
Grade VI	Total paralysis	No movement

6. Materials Required

- Examination table
- *Uloga Suttigai* probe (Figure 1)
- Gas stove, lighter
- *Padikara neer* for local sterilization
- Gloves
- Cotton role
- Gauze roll
- Cut sheet
- Aloe vera pulp
- Bandage cloth



Figure 1. Uloga *Suttigai* probe.

7. Standard Operating Procedures of *Suttigai*

7.1 Application of *Suttigai*

The copper probe will be used for the procedure. The *Suttigai* procedure is categorized into:

- Pre-operative procedure
- Operative procedure
- Post-operative procedure

7.1.1 Pre-operative Procedure

- Educate the patient

- Obtain informed consent
- Ask the patient to satisfy natural urges
- Check vitals

7.1.2 Operative Procedure

- The patient should be supine or prone, exposing the face.
- Wear surgical gloves.
- Sterilize the site with Padikara neer and wiped with dry sterilized gauze and covered with a cut sheet.
- Mark the tenderness site with a marker (Figure 2).
- Metal probe heated up to red hot.
- Hold the red hot metal probe strongly in one hand and touch the marked points.

7.1.3 Post-operative Procedure

- Rub Aloe vera pulp over the *suttigai* site.
- Patient was observed for 30 min after the procedure.
- Patients were strictly advised not to allow water contact at the *suttigai* site for 24 hrs.

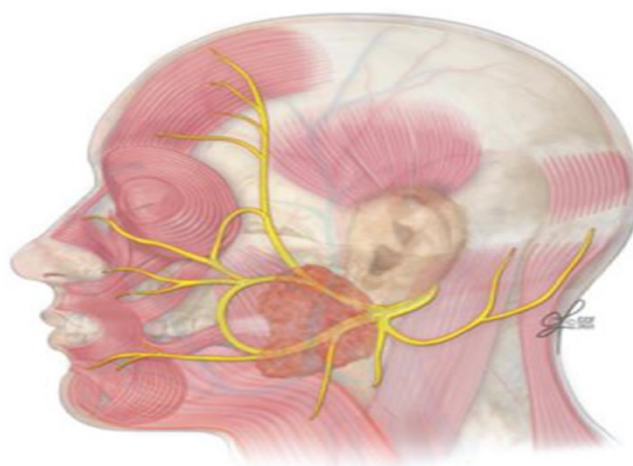
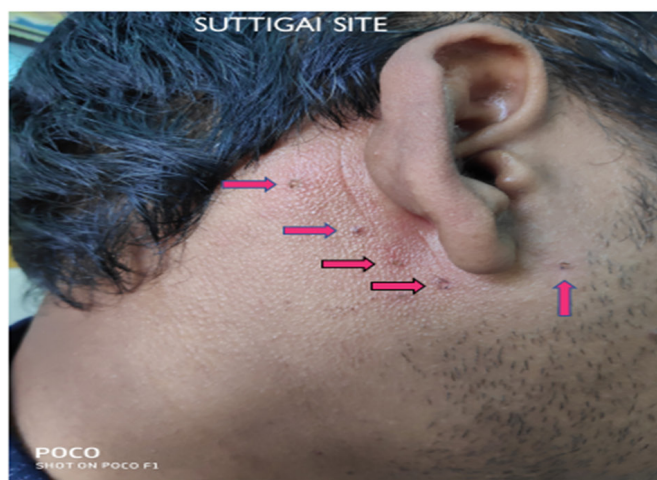


Figure 2. Anatomical site of *Suttigai* therapy.

8. Results

Clinical assessments were made from the Siddha Eight Fold System of Clinical Assessment (*Envagai Thervu*), Clinical features, and grading of the scoring pattern. *Envagai thervu* was assessed before and after treatment and is portrayed in (Table 2). Before starting the treatment, the House-Brackmann grading of facial nerve function score measured was GRADE IV; after 3 days of *Suttigai*, it was

GRADE II. Then after a week, it was GRADE I, and the patient reported the OPD with normal facial movements. There was overall noteworthy progress in symptoms of Bell's palsy. It is portrayed in Figures 3,4 and 5. There are no side effects during and after the treatment. The timeline of Siddha's eightfold system of clinical assessment, clinical features, and House-Brackmann grading are portrayed in Tables 2, 3, and 4 respectively.

Table 2. Siddha eight-fold system of clinical assessment (*Envagai Thervu*)

Envagai Thervu	Before Treatment	After Treatment (7 th day)
<i>Naadi</i>	<i>Vathakabam</i>	<i>Vathakabam</i>
<i>Sparisam</i>	Loss of sensation on the right side	Normal
<i>Naa</i>	Loss of taste on the anterior two-thirds of the tongue	Can identify the taste
<i>Niram</i>	Normal	Normal
<i>Mozhi</i>	Slurred speech (dysarthria)	Normal
<i>Vizhi</i>	Affected (dry eye/redness/burning sensation/drooping of eyelids)	Normal
<i>Malam</i>	Normal	Normal
<i>Moothiram</i>	Normal	Normal

Table 3. Assessment done based on the gradation system and according to house and brackmann

Grade	Clinical Features	Before treatment	After 3 days of <i>Suttigai</i>	After a week	After a month of follow up
I	Normal	-	-	✓	✓
II	Mild dysfunction	-	✓	-	-
III	Moderate dysfunction	-	-	-	-
IV	Moderately severe dysfunction	-	-	-	-
V	Severe dysfunction	-	-	-	-
VI	Total paralysis	-	-	-	-

Table 4. Assessment of clinical features before and after treatment

Sl. No	Clinical features	Before treatment	After 3 days of <i>Suttigai</i>	After a week	After a month of follow up
1	Symmetrical wrinkling of the forehead	Absent	Slight asymmetry	Present	Present
2	Clenching of teeth	Asymmetrical	Slight asymmetry	Symmetrical	Symmetrical
3	The closing of the eye against resistance	Incomplete closure	Complete closure with minimal effort	Possible	Possible
4	Blowing of cheeks	Not possible	Possible with effort	Possible with effort	Possible
5	Taste sensation (antr. 2/3 rd)	Absent	Can identify the taste	Can identify the taste more than the previous visit	Can identify the taste
6	Corneal reflex	Absent	Present	Present	Present
7	Glabellar tap	Positive	Negative	Negative	Negative

**Figure 3.** A picture of the face representing symmetry of furrowing eyebrows taken before *Suttigai* therapy and 7 days after *Suttigai* therapy.**Figure 4.** Results of face representing mouth deviation taken before *Suttigai* therapy and 7 days after *Suttigai* therapy.



Figure 5. A picture of the face representing blowing of mouth taken before *Suttigai* therapy and 7 days after *Suttigai* therapy.

9. Discussion

Bell's palsy is the most common form of all facial paralysis, and it is of an abrupt onset in nature. The patient attains maximal weakness within 48 hrs in this condition. The treatments considered for Bell's palsy include oral corticosteroids (prednisolone) and antiviral drugs¹².

Though it is a self-limiting condition, the patient had a previous history of similar symptoms before 6 years on the left side of his face and took corticosteroids and allopathy medications. He is recovered to normal facial function after 2 years. So he was reported to the National Institute of Siddha Pura maruthuvam OPD for his presenting complaints.

The primary humour affected in *mugavatham* is *Vatham* and Secondary humour affected is *Kabam*. Since *Suttigai* is one of the superior procedures in terms of effectiveness and there is a lower rate of recurrence after this treatment and *Suttigai* is meant for diseases related to *vatham* and *kabam*. Hence, based on the above criteria, *Suttigai* therapy was planned for this case. Here, an attempt was made to establish a treatment protocol for *Suttigai* for the acute condition of Bell's palsy.

In this case study, there were four assessment periods; the result is made based on them. The first assessment was done before the treatment, the second assessment was done on the 3rd day after the *Suttigai* procedure, the third assessment was done on the 7th day, and the last assessment was done after the follow-up period of 30 days. A significant improvement was observed in the signs and symptoms of the patient.

The assessment was based on the House–Brackmann grading scale of facial nerve weakness. Before treatment, the Patient was in Grade IV, i.e. moderately severe dysfunction. The patient had Gross obvious weakness and disfiguring asymmetry of the face. He had incomplete closure of eyes, and asymmetrical wrinkling of forehead seen while clenching the teeth, asymmetry of the face seen. Blowing of cheeks is not possible. While examining the sensory systems, taste sensation in the anterior 2/3rd is absent.

Necessary blood investigations like complete blood count, bleeding time, clotting time, blood sugar – fasting and postprandial, HBsAg, VDRL, and HIV I and II were taken and everything was found to be within normal limits. So Patient was enrolled for *Suttigai* therapy in the *Suttigai* Unit of Pura Maruthuvam.

After getting the written consent, the patient was posted for *Suttigai* therapy. A copper probe was heated to red-hot and *Suttigai* therapy was given behind the ear and face of the affected side. *Suttigai* is a simple OPD procedure, so he is discharged after monitoring the patient for one hour. The patient came for review on the 3rd day after the *Suttigai* procedure. The patient was examined and the grading of the House–Brackmann scale of the facial nerve was improved from grade IV to grade II. The patient responded well to this treatment as there was the appearance of wrinkles over the forehead on frowning and improvement in the closure of eyes with minimal effort and the Mouth is in slight asymmetry.

The patient is reported to OPD on the 7th day after the procedure with normal facial functions in all areas. There is no noticeable weakness on close inspection. The patient was able to close his eyes completely. The patient had a symmetrical face and wrinkling of the forehead. Blowing of cheeks was possible. While examining the sensory systems, taste sensation in the anterior 2/3rd was normal, and he was able to identify the taste.

10. Conclusion

The acute onset LMN Facial palsy is considered as *Mugavatham* and *Suttigai* therapy was given to balance the vitiated humour. The patient responded positively within 3 days of treatment and the majority of complaints were relieved within 7 days. This study proves that *Suttigai* is one of the very effective treatments in reducing symptoms of *mugavatham* in a very short time. The procedure is simple, cost-effective, safe, and can be done at the OPD level. The number of sittings of *Suttigai* depends on the chronicity and severity of the disease. Scar disappears within 3-4 weeks of treatment. Hence *Suttigai* can be an acceptable and successful treatment in the management of *Mugavatham*.

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