

# Osteopathic Manipulative Treatment for Bell's palsy: a case report

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## Background

The incidence of unilateral idiopathic paralysis of the seventh cranial nerve (Bell – Figure 1) is estimated at 20/30 cases per 100,000/year, with a full resolution of over 70%. The aim of this study is to hypothesize the mechanisms of action and efficacy of osteopathic manipulative treatment (OMT) in Bell's palsy. To the authors knowledge, there are no prior reports in the literature that describe an OMT approach for patients with Bell's palsy outside of a case report where it is not used any rating scale.

## Case report

21-year-old woman, on waking shows impediment facial muscle activity of the right side, inability to close the eyelid, buccal rhyme deflected left and alteration of the emission of phonemes (Figure 2). The patient, hospitalized, receives a diagnosis of Bell's palsy (ICD10:G51.0) and is prescribed drug therapy. Were performed thirteen OMT from June 10, 2013 to April 18, 2014. The OMT was applied individually and different techniques were used depending on the Somatic Dysfunctions that was found: direct-indirect myofascial-release, high-velocity-low-amplitude technique, low-velocity-high-amplitude technique, cranio-sacral technique, visceral technique and muscle-energy technique.

## Results

The patient has completely solved her trouble in less time, without assuming further medical treatment and without presenting sequelae. Were used as the outcome the House-Brackmann scale (Figure 3), that distinguishes six different degrees of paralysis, to the first (t0), the second (t1), the sixth (t2), the eighth (t3) and the tenth treatment (t4). In the last three sessions, the scale was not administered because the patient showed signs lower of the score I. Were detected the following results: t0=IV degree; t1=IV, t2=II, t3=II and t4=I (Figure 4).

## Discussion

We can assume the presence of factors that favor the onset of this disorder as a fascial tension at the stylus mastoid hole output (Figure 5), with shear torsion and compression, the variation of the relative PH in the tissues (local acidosis) and factors of action and efficacy of OMT as a reduction of dural, fascial, muscular tension, effect on metabolic activity of nerve and circulation of liquor, action of peripheral lymphatic drainage.

## Conclusions

The early start of the OMT is helpful to improve the clinical and quality of life of patients with Bell's palsy, and to reduce the risk of degeneration and sprouting.

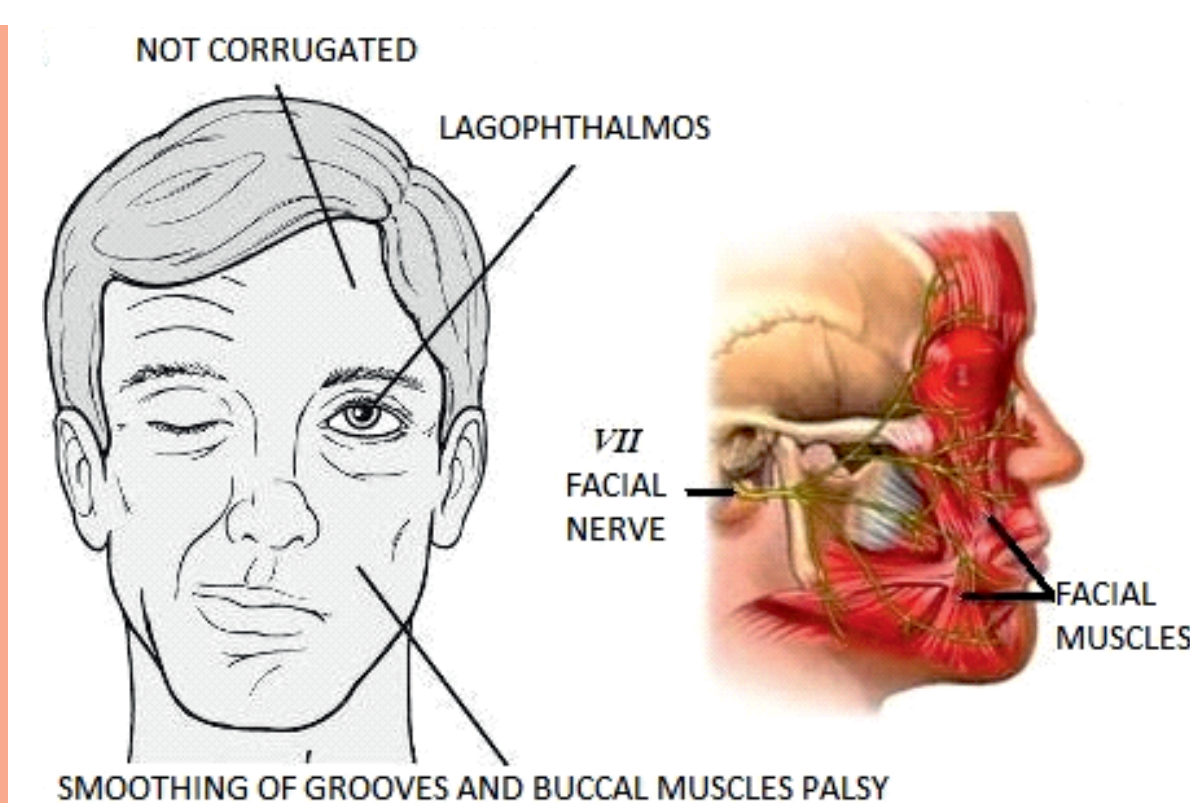


Figure 1. Characteristic signs of Bell's palsy.

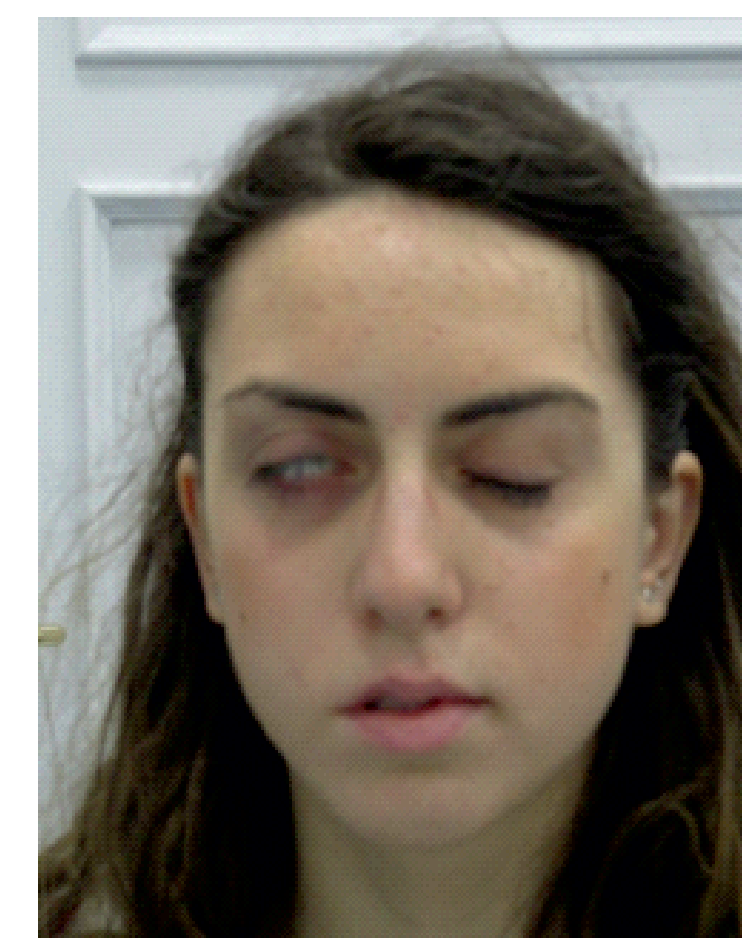


Figure 2. Signs of the patient at first visit.

Grade	Description	Characteristics
I	Normal	Normal facial function in all areas
II	Mild dysfunction	Slight weakness noticeable on close inspection; may have very slight synkinesis
III	Moderate dysfunction	Obvious, but not disfiguring, difference between 2 sides; noticeable, but not severe, synkinesis, contracture, or hemifacial spasm; complete eye closure with effort
IV	Moderately severe dysfunction	Obvious weakness or disfiguring asymmetry; normal symmetry and tone at rest; incomplete eye closure
V	Severe dysfunction	Only barely perceptible motion; asymmetry at rest
VI	Total paralysis	No movement

Figure 3. House-Brackmann scale.

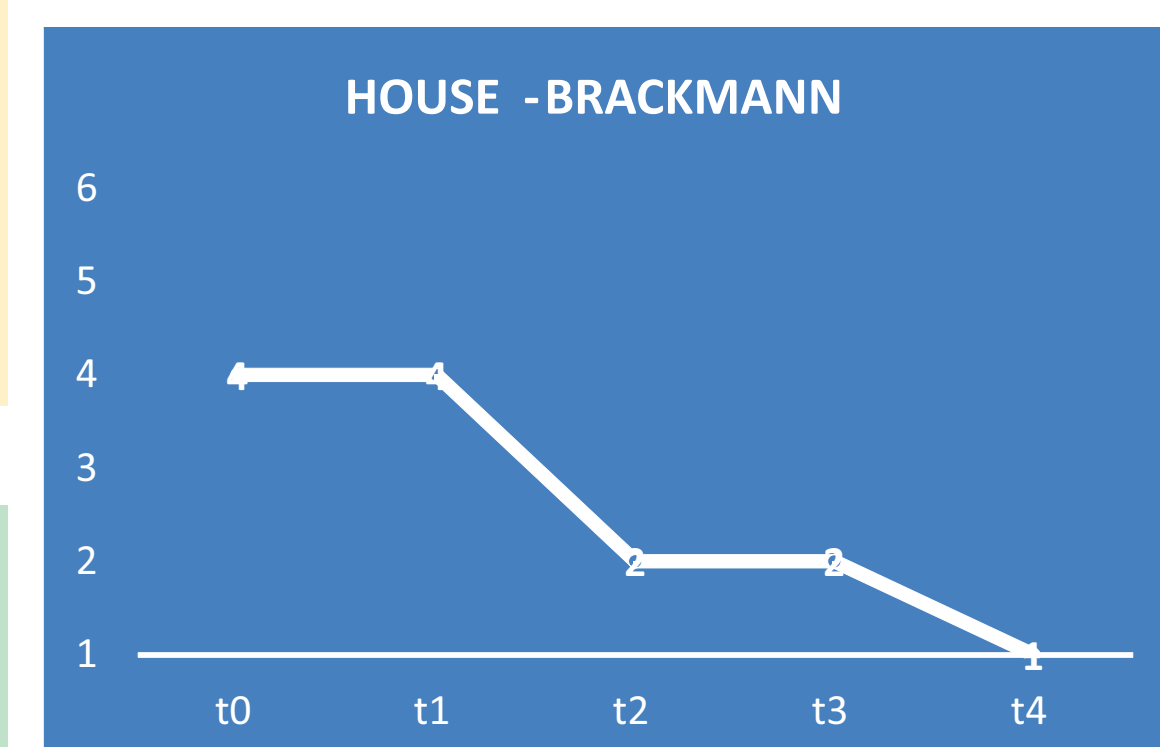


Figure 4. Improvement of House-Brackmann score.

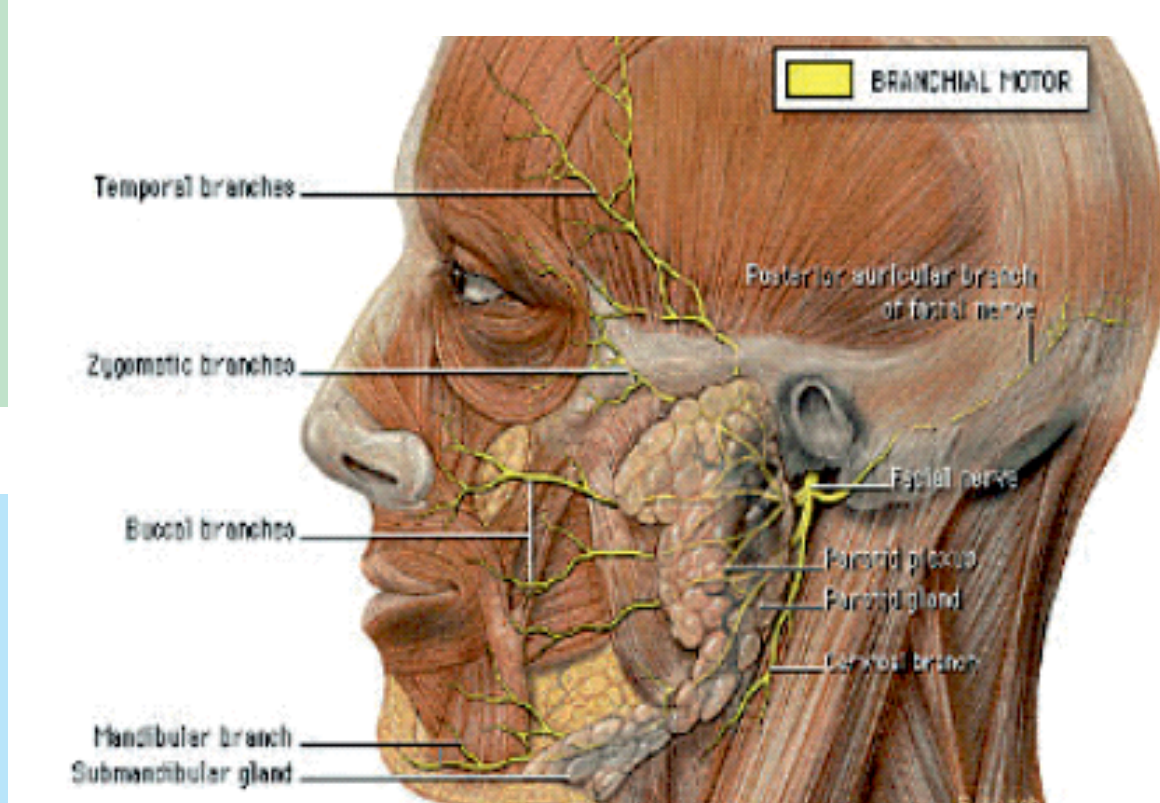


Figure 5. Stylomastoid foramen.

## References

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