

## **Low Reactive Laser Therapy For Facial Paralysis**

Takafumi Ohshiro, Toshio Ohshiro, Katsumi Sasaki, Shunji Fujii and Yuki Taniguchi

1) Ohshiro Clinic\_2) Japan Medical Laser Laboratory

**Abstract:**

Facial nerve palsy is one of the most common diseases in head and neck lesions, and affected patients suffer from facial disfigurement and dysfunction. Since 1980, we have been applying low reactive level laser therapy (LLLT) for patients with facial paralysis. We report herein on the results of a retrospective study concerning those patients in whom LLLT has been applied for peripheral facial paralysis. Seventy-four patients (42 male and 32 female) received LLLT for various entities of facial paralysis over the past 28 years, and included 50 cases with idiopathic facial paralysis, 9 cases with Ramsay-Hunt syndrome, 8 cases of facial and neck tumor, and 7 cases of facial trauma. The overall total improvement rate was 71.4%. No adverse effects were reported in the patients received LLLT for facial paralysis. Among the 4 diagnostic groups, there was no difference in the mean improvement rate. In all patients whose treatment was given within one month of onset was obtained a complete recovery within 4 months. The longer was the period between onset to starting the treatment, the longer was the required therapeutic period. LLLT was effective for facial paralysis in both the acute and chronic phase. LLLT was particularly effective for the acute phase patients whose onset before treatment was 1 month or less. During the period of between 2 months and 6 months from onset, when the injured nerve had the possibility of recovery, LLLT should be performed. In the chronic phase, during the period of over 6 months from onset, LLLT can improve the synkinesis and contracture of the facial muscle. This study is the first report about LLLT for a wide variety of facial paresis. It is not a randomized control study, however, and further study is warranted in order to assess both the efficacy and possible LLLT mechanisms in detail.

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