Objective: Myalgic Encephalomyelitis/Chronic fatigue syndrome (ME/CFS) is an illness characterized by disabling fatigue lasting for at least 6 months. There are many controlled trials and case-control treatment studies that utilized immunological substances, pharmacological products, nutritional supplements, physical therapies, and cognitive behavioral therapy. Because of the unclear etiology, diagnostic uncertainty, and the resultant heterogeneity of the ME/CFS population, there are no firmly established treatment recommendations for ME/CFS. Recently Tei et al. reported 2 CFS cases in whom thermal therapy improved the subjective symptoms. Thermal therapy has been shown to increase stroke volume and cardiac output in patients and improve the quality of life, sleep quality, and general well-being of these subjects. Thermal therapy using far-infrared ray dry sauna may be a promising method for the treatment of ME/CFS. We examined the applicability of Waon therapy (soothing warmth therapy) as a new treatment for patients with ME/CFS.

Methods: Nine female ME/CFS patients (mean age, 38.4±11.2 years old; range, 21-60) who fulfilled the criteria of the Ministry of Health, Labor and Welfare of Japan and Canadian clinical case definition of ME/CFS participated in this study. The mean illness duration was 3.1±1.8 years (range, 1-6). The mean performance state was 6.9±0.9. The patients were placed in the sitting position in an infrared-ray dry sauna maintained at an even temperature of 45°C for 15 minutes, and then transferred to a room maintained at 26-27°C where they were covered with a warm blanket from the neck down to keep them warm for 30 minutes. They received thermal therapy twice a day for 3 weeks in hospital or once a day at the outpatient clinic for 5 weeks. Their functional health and well-being scores were determined using SF-36 before treatment, after 30 treatments and during follow-up (mean follow-up period, 27.9±10.5 months; range 7~40).

Results: Seven patients experienced a significant improvement in physical and mental condition by Waon therapy, and the effect continued throughout the observation period. In two patients, no improvement of symptoms was observed. Waon therapy brought the improvement in the score of Physical functioning (p<0.05), Role physical (RP) (p<0.05), Bodily pain (p<0.001), General health perceptions (p<0.03) and Role emotional (RE) (p<0.005) of FS-36 in good responders. However, the therapy did not bring any improvement in the score of Vitality, Social functioning and Mental health.

In poor responders, no improvement was observed in the score of FS-36. Mean duration of illness in poor responders was longer than in good responders (4.5±0.7ys:2.7±1.9ys, p<0.09). The performance state at the admission was almost same between poor responders and good responders (7±0.6:9±1.1).

Conclusion: Waon therapy is effective for the treatment of ME/CFS. Although the present
study included only 10 patients, the effects observed in our patients were dramatic. Further clinical studies in larger ME/CFS patient populations are required to confirm the effects of this method of treatment.

**Keywords:** Myalgic encephalomyelitis, Chronic fatigue syndrome, Waon therapy, FS-36