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Physical therapy improves lower limb muscle strength but not function in individuals with amyotrophic lateral sclerosis: a case series study

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Dear Editor. Amyotrophic lateral sclerosis (ALS) is characterized by degeneration of upper and lower motor neurons. Initial muscle weakness usually occurs in isolated muscles and is followed by progressive weakness and functional limitations. ALS has no cure, although a few agents can inhibit the progression of symptoms [1, 2]. Therefore, individuals with ALS must maintain activities of daily living (ADL) as much as possible with symptomatic treatments.

Exercise for mild to moderate muscle weakness in patients with ALS may be effective for maintaining or improving muscle strength and ADL [1]. However, we have few reports on the effects of exercise in patients with ALS, and the results of interventions for muscle strength are inconsistent [3-6]. Thus, the relationship between the severity of ALS and the effectiveness of exercise is unclear, and the effect size of exercise is also unclear. Here, we investigated the short-term effects of physical therapy on lower-limb muscle strength in individuals with ALS.

This study was approved by the Osaka University Medical Hospital ethical committee. In accordance with provisions of the ethical committee, the research plan was published (<http://www.hosp.med.osaka-u.ac.jp/research/data/rehabilitation1.pdf>), and informed consent was not required. Personal information was

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