Response to Letter Regarding Article, “Prevalence and Length of Recovery of Pusher Syndrome Based on Cerebral Hemispheric Lesion Side in Patients With Acute Stroke”

Response:

We thank Santos-Pontelli et al for their interest and comments on our recent article.

Because our investigation was performed retrospectively, frequency and duration of physical and occupational therapy sessions could not be controlled. At our institution, physical and occupational therapy sessions are conducted on weekdays during hospital stay, and duration of each session is recorded. No significant difference was observed in the total duration of physical and occupational therapy sessions between 27 patients with pushing behavior in whom the right cerebral hemisphere was damaged (PBRHD) and 8 patients with pushing behavior in whom the left cerebral hemisphere was damaged (PBLHD; PBRHD: 1566.7 ± 888.4 minutes, PBLHD: 1042.5 ± 514.1 minutes, P = 0.123, unpaired t test). In addition, no significant differences were observed in the number of sessions of physical therapy (PBRHD: 18.19 ± 7.6, PBLHD: 17.1 ± 3.6, P = 0.590), the number of sessions of occupational therapy (PBRHD: 12.3 ± 9.6, PBLHD: 12.9 ± 14.0, P = 0.901), and the duration of hospital stay (PBRHD: 34.1 ± 16.5, PBLHD: 29.9 ± 6.0, P = 0.279) between PBRHD and PBLHD.

As supplementary data to our recent article (Table 2), we present the following information. No significant differences were found in the time until first assessment from stroke onset (PBRHD: 7.3 ± 3.8 days, PBLHD: 6.9 ± 3.3 days, P = 0.823) or stroke etiology (PBRHD: 4 with hemorrhagic and 4 with ischemic stroke, PBLHD: 15 with hemorrhagic and 12 with ischemic stroke, P = 0.999, χ² test) between PBRHD and PBLHD. In contrast, frequency of aphasia was significantly higher in patients with PBLHD than in patients with PBRHD (PBRHD: 7 with aphasia [87.5%], PBLHD: one with aphasia [3.7%]; P = 0.001).

Our physical therapy involves visual feedback, which has been used in many studies such as those of Karnath and Broetz.1,2 Perceptual feedback (ie, auditory and somatosensory) is also important in physical therapy, as shown by Paci.3 In addition, we occasionally adopt a traditional approach, as described by Davies.4 The approach to be used is decided on an individual basis according to the needs and responses of each patient.

In our study, depression symptoms of patients were not assessed. Patients with dementia and/or consciousness disorders were excluded in this time course study. By doing this, we ensured that all patients participating in this study would be able to undergo physical therapy so that we could evaluate pure recovery from pushing behavior. Therefore, we feel confident that no patients were unable to execute physical therapy due to depression.

No significant difference was found in the frequency of neglect between PBRHD and PBLHD according to the Stroke Impairments Assessment Set. Recently, Kleinman et al5 reported on the frequency of distribution of neglect types among right brain-damaged patients and left brain-damaged patients. In the left brain-damaged population, allocentric neglect was more frequent than egocentric neglect. If only egocentric tasks (eg, line cancellation) had been examined, neglect would have been found to be much more common in right brain-damaged than left brain-damaged patients. When the tasks for allocentric spatial representation (eg, copying words) and egocentric spatial representation were combined, the frequency of neglect between right brain-damaged and left brain-damaged patients was identical. In our study, the neglect phenomenon was defined as a visuospatial perception score of ≤ 2 points according to Stroke Impairments Assessment Set using a very simple task. Our results showed no significant difference in the frequency of neglect between the 2 groups. In addition, handedness and hemianopia were not assessed. To determine the reason for the difference in recovery time between PBRHD and PBLHD, further study is required.

Disclosures

None.

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