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DOI: [10.1159/000315154](https://doi.org/10.1159/000315154)**Very Early versus Delayed Mobilisation after Stroke**David Stokelj, Sara Musho Ilbeh, Antonio Granato,
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Sciences, Stroke Unit, University of Trieste, Trieste, Italy**Question**

Does very early mobilisation (started as soon as possible and no later than 48 h after the onset of symptoms) improve recovery in acute stroke patients in comparison with conventional care?

Data Source

Cochrane systematic review of randomized controlled trials [1]. The Cochrane Stroke Group Trials Register and 25 databases including the Cochrane Central Register of Controlled Trials (The Cochrane Library Issue 3, 2007), MEDLINE (1950 to August 2007), EMBASE (1980 to September 2007), CINAHL (1982 to December 2006) and AMED (1985 to January 2007) were analyzed. Relevant ongoing trials and research registers (searched January 2007), Wanfangdata (searched March 2007) and the relevant Chinese papers, hand-searched journals and reference lists were included; researchers in the field were also contacted.

Patients

Patients with a definite clinical diagnosis of stroke (focal neurological deficit of cerebrovascular origin) who could be mobilised within 48 h of stroke onset with no age restrictions.

Treatment

Very early mobilisation was defined as any intervention delivered with the aim of reducing the time from stroke onset to first mobilisation, and increasing the amount of out of bed physical activity (e.g. participation in activities of daily living, such as walking to the toilet, transferring on/off the toilet, sitting on the bed, standing and walking). Conventional care was defined as the usual mobilisation practice.

Outcome Measures

The primary outcomes were death or a poor outcome: the number of patients who died or remained dependent at the end of scheduled follow-up (Barthel score <15 or equivalent and/or admission to institutional care or modified Rankin score 3–6). Institutional care was defined as care within a residential home, nursing home or hospital at follow-up or at discharge.

Table 1. Mean difference in efficacy between very early mobilisation and standard care

Outcomes	Treated (n = 38)	Controls (n = 33)	Weighted mean difference
Death or poor outcome			
at 3 months	23	23	0.67 (0.25–1.79)
Mortality at 3 months	8	3	2.67 (0.64–11.03)
Death or dependence			
at 3 months	23	23	0.67 (0.25–1.79)

Secondary outcomes were: death from any cause; dependence; number of patients requiring institutional care; performance in activities of daily living; performance in extended activities of daily living (community and domestic activities); patient subjective health status/quality of life; time to walking unassisted (without help from another person) reported alone or as a component of a functional mobility scale; potential adverse events; number and/or severity of adverse effects including deep vein thrombosis, non-fatal pulmonary embolism, incidence and grade of pressure sores (using standardised grading scale), number of incontinent episodes over 24 h, severity of incontinence, chest infection, falls, and physiological variables recorded (blood pressure, oxygen, temperature); patient mood. The follow-ups were at 3 and 12 months after stroke.

Quality of the Studies

One review author (M.T.), who had no involvement in any included studies, evaluated the methodological quality of included trials.

Main Results

One of 39 trials of interest was included [2]. Seventy-one patients (54% male, 46% female, mean age 74.7 years) were analysed. Eighty-seven percent had suffered an ischaemic stroke that affected the right side in 51% of cases. For 75% of patients, this was their first-ever stroke. Of the common risk factors for stroke, 70% of the group presented with hypertension, 28% with ischaemic heart disease, 27% with hypercholesterolaemia, and 54% were either current smokers or had previously smoked. Stroke severity was measured using the National Institutes of Health Stroke Scale (NIHSS) [3] and classified as mild (NIHSS 0–7), moderate (NIHSS 8–16) or severe (NIHSS >16) stroke. Stratified randomisation was used to balance stroke severity between groups. The mean baseline NIHSS was 10, and 58% of the sample

had experienced moderate or severe stroke. There were no significant baseline imbalances between groups in important prognostic factors.

In the included study, which was of high methodological quality, no difference was found between groups, neither in primary nor in secondary outcomes (mortality, dependency, institutionalisation, activities of daily living, quality of life, time to walking, adverse events and patient's mood) (table 1). No significant harms were identified and the only significant benefit identified was a lower rate of non-serious adverse events in the very early mobilisation group. Given these results, there is insufficient evidence of benefit or harm to recommend commencing mobilisation within 48 h after stroke.

Conclusions

There is insufficient evidence regarding the harm or benefits of very early mobilisation after stroke to make any recommendation on the practice. This review found no evidence to suggest that the practice should be discontinued in countries where very early mobilisation is a well established part of stroke unit care because this is the experience of the team treating acute stroke patients. However, to date, there is insufficient evidence to suggest that the practice should be adopted more broadly.

Comments

We can say that there is insufficient evidence to support the efficacy of very early mobilization in comparison with conventional rehabilitation treatment. However, our daily practice and the absence of significant adverse effects indicate that it is important to evaluate the benefits and risks of early mobilization in every single case.

References

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