CHEST Online Supplement

Interventions to Improve the Physical Function of ICU Survivors

A Systematic Review

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e-Appendix 1

MEDLINE Search Strategy

1. (critical care or intensive care or critical illness).mp.
2. randomized controlled trial.pt.
3. controlled clinical trial.pt.
4. randomized.ab.
5. placebo.ab.
6. clinical trials as topic.sh.
7. randomly.ab.
8. trial.ti.
9. or/2-8
10. humans.sh.
11. 9 and 10
12. 1 and 11
13. limit 12 to English language
14. limit 13 to date 1990 to 2011
15. stroke.ti.
16. traumatic brain.ti.
17. (infant$1 or neonat$ or newborn or pediatric or paediatric or child or children).ti.
18. or/15-17
19. 14 not 18
20. limit 19 to English language
21. remove duplicates from 20

e-Appendix 2

Physiotherapy Evidence-Based Database

The Physiotherapy Evidence-Based Database (PEDro) scale consists of 11 items. The first item relates to external validity and does not add to the final score. The remaining 10 items consider aspects of trial quality. These 10 items are summed to give a total score out of 10.[18-21]

Item 1. Eligibility criteria were specified

This item is fulfilled if both the source of participants and a list of criteria used to determine who was eligible to participate in the study are described.

Item 2. Subjects were randomly allocated to groups

This item is satisfied if the report states that allocation was random or if a random allocation procedure was used but not if allocation is by hospital record number or birth date or by alternation.

Item 3. Concealed allocation

This item is, therefore, satisfied if the report states that allocation was concealed, or if a concealed allocation procedure (eg, use of sealed opaque envelopes or a telephone or off-site randomization service) is described.

Item 4. The groups were similar at baseline regarding the most important prognostic indicators

This item is satisfied if the report describes, at baseline, at least one measure of the severity of the condition being treated and at least one other important measure of the treatment effect. The rater must be satisfied that the groups' outcomes would not be expected to differ, on the basis of baseline differences in prognostic variables alone, by a clinically significant amount.

Items 5, 6, and 7. There was blinding of all subjects, therapists, and assessors

To satisfy these items, the person in question (subject, therapist, or assessor) must not have known to which group the subject had been allocated. In addition, subjects and therapists are only considered to be "blind" if they would have been unable to distinguish between the treatments applied to different groups.

Item 8. Measures of at least one key outcome were obtained from $>85\%$ of the subjects initially allocated to groups

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This item is satisfied if the report states both the number of subjects initially allocated to groups and the number of subjects with outcome data at follow-up. If outcomes are measured at several follow-ups, the outcome must have been measured in >85% of subjects at one of those follow-ups.

Item 9. All subjects for whom outcome measures were available received the treatment or control condition as allocated, or, if this was not the case, data for at least one key outcome was analyzed by "intention to treat"

An intention-to-treat analysis means that, if subjects did not receive their allocated intervention, all their available data were still analyzed as though they had received it.

Item 10. Results of between-group statistical comparisons are reported for at least one key outcome

In clinical trials, statistical tests are performed to determine if the difference between groups is greater than can plausibly be attributed to chance. The between-group statistical comparison involves statistical comparison of one group with another. Depending on the design of the study, this may involve comparison of two or more treatments or comparison of treatment with a control condition. The analysis may be a simple comparison of outcomes measured after the treatment was administered or a comparison of the change in one group with the change in another (when outcomes are measured at a number of follow-ups, the effect of treatment is often reported as a group × time interaction). The comparison may involve hypothesis testing (which provides a *P* value, describing the probability that the groups differed only by chance) or estimation of the size of the treatment effect (for example, the mean or median difference and 95% CI).

Item 11. Study provides both point measures and measures of variability for at least one key outcome

The best estimate of the treatment effect is the difference between (or ratio of) the outcomes of treatment and control groups. This is a point measure. A measure of the degree of uncertainty associated with this estimate can only be calculated if the study provides measures of variability, such as SDs, SEs, CIs, interquartile ranges, and ranges.