THE COCHRANE CORNER

EJPRM systematic continuous update on Cochrane reviews in rehabilitation: news from September 2010 to January 2011

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Aim. Since 2007 we focused our attention as EJPRM to the best available clinical evidence as offered by the Cochrane Collaboration. Due to the absence of a specific Rehabilitation Group (only a Field exists), reviews of PRM interest are in different groups and not easy to find. Consequently, the EJPRM offer the service of listing and presenting all these reviews systematically. The aim of the present paper was to systematically review all the new rehabilitation papers published during 2010 fourth quarter up to the beginning of 2011 from the Cochrane Library in order to provide to physicians involved in the field a summary of the best evidence nowadays available.

Methods. The authors systematically searched all the new papers of rehabilitative interest in the 1st of September 2010 to the 1st of February 2011 in the Cochrane Library. The retrieved papers have been then divided in subgroups on the base of the topic and the Cochrane Groups.

Results. The number of included papers was 3, all of these were new reviews. One new reviews deals with neurological rehabilitation, one with musculoskeletal disorders and one with orthoses. No updated reviews were retrieved.

Conclusion. The Cochrane Collaboration and his product, the Cochrane Library, are really relevant instruments to improve EBM in medical practice and thus also in the Rehabilitation Field. The present paper can help Rehabilitation Specialists to easily retrieve the conclusions of the most relevant and updated reviews in order to change their clinical practice in a more rapid and effective way.

KEY WORDS: Rehabilitation - Practice management, medical - Evidence-based practice.

Knowledge and papers about rehabilitation topics are growing up quite quickly during the last years. Sometimes results are discordant, other times are based on small population, thus limiting the strength of the findings. The best way to obviate to these problems and to synthesize results driving clinical indications is to perform systematic reviews on high interest topic. This is the main aim of the Cochrane Collaboration, so that today the Cochrane reviews are considered the most reliable instruments of synthesis. In order to present to our readers the best available evidence in the field of Rehabilitation, we continuously perform systematic reviews of the articles regularly published in the Cochrane Library.

In the present article readers can find a list of papers of rehabilitative interest systematically researched and reviewed published from the beginning of September 2010 to the end of January 2011 in the Cochrane Library. In the end of the paper, a list of all the existing systematic reviews of rehabilitation interest is reported.

Materials and methods

The authors systematically searched all the new papers of rehabilitative interest in the 1st of September 2010 to the 1st of February 2011 in the Cochrane Library. We present the papers divided in subgroups...
on the basis of the topic. We also continue the update of the list of reviews of interest for PRM specialists in Appendix 1 that was first published in 2007. All new papers have been added to the list of Cochrane reviews of PRM interest, while the withdrawn reviews have been cancelled.

Results

The number of included papers was 3, all of these were new reviews. One new review dealt with neurological rehabilitation, one with musculoskeletal disorders, and one with orthoses. No updated reviews were retrieved. No updated reviews were retrieved.

The reader will find the main results of each single review in the following paragraphs, being the reviews divided according to the topic and the Cochrane Group.

Musculoskeletal rehabilitation

Cochrane Back Group

Botulinum toxin injections as a treatment for low back pain and sciatica.—The authors excluded evidence from nineteen studies due to non-randomisation, incomplete or unpublished data and included three randomized trials (N=123 patients). Only one study included patients with chronic non-specific low back pain (LBP); the other two examined unique subpopulations. Only one of the three trials had a low risk of bias and demonstrated that BoNT injections reduced pain at three and eight weeks and improved function at eight weeks better than saline injections. The second trial showed that BoNT injections were better than injections of corticosteroid plus lidocaine or placebo in patients with sciatica attributed to piniform syndrome. The third trial concluded that BoNT injections were better than traditional acupuncture in patients with third lumbar transverse process syndrome. Both studies with high risk of bias had several key limitations. Heterogeneity of the studies prevented meta-analysis. There is low quality evidence that BoNT injections improved pain, function, or both better than saline injections and very low quality evidence that they were better than acupuncture or steroid injections.

The authors identified three studies that investigated the merits of BoNT for LBP, but only one had a low risk of bias and evaluated patients with non-specific LBP (N=51). Further research is very likely to have an important impact on the estimate of effect and the authors confidence in it. Future trials should standardize patient populations, treatment protocols and comparison groups, enlist more participants and include long-term outcomes, cost-benefit analysis and clinical relevance of findings.

Neurological rehabilitation

Cochrane Stroke Group

Water-based exercises for improving activities of daily living after stroke.—The authors included four trials involving 94 participants in this review. There was a significant improvement in activity of daily living (mean difference [MD] 15.20 points on the “Capacidad funcional” (functional capacity) subscale of the Brazilian-Portuguese version of the SF-36; 95% confidence interval [CI] 8.36 to 18.04; P<0.0001) and on muscle strength (MD 1.01 Nm/kg; 95% CI 0.19 to 1.83; P=0.02) but these results should be interpreted with caution because population numbers were small and the results are based on single studies. There was no significant improvement in ability to walk (MD 0.14 m/s; 95% CI -0.32 to 0.606; P = 0.55), postural balance (MD 3.05 points; 95% CI -3.41 to 9.52; P = 0.35) or fitness (MD 3.6 (VO2max; 95% CI -0.53 to 7.73; P = 0.09) after water-based exercises treatment compared to control. Adverse effects were not reported.

The evidence from randomised controlled trials so far does not confirm or refute that water-based exercises after stroke might help to reduce disability after stroke. There is a lack of hard evidence for water-based exercises after stroke. Better and larger studies are therefore required.

Orthoses

Bone, Joint and Muscle Trauma Group

Foot orthoses for patellofemoral pain in adults.—Two trials with a total of 210 participants were included. Both trials were at some risk of performance bias. One trial had four intervention groups and the other had three. One trial found that foot orthoses when compared with flat insoles (control
group) had better results at six weeks in knee pain (participants with global improvement: risk ratio 1.48, 95% confidence interval 1.11 to 1.99), but not at one year follow-up. Participants in the orthoses group reported significantly more adverse effects (e.g. rubbing, blistering) compared with the flat insole group (risk ratio 1.87, 95% confidence interval 1.21 to 2.91). Both trials in their comparisons of orthoses plus physiotherapy versus physiotherapy alone found no statistically significant differences between the two intervention groups in knee pain or function. Results for knee pain outcomes did not show significant differences between foot orthoses and physiotherapy. Although participants in the physiotherapy group had consistently better results for the functional index questionnaire, the clinical relevance of these results is uncertain.

While not robust, the available evidence does not reveal any clear advantage of foot orthoses over simple insoles or physiotherapy for patellofemoral pain. While foot orthoses may help relieve knee pain over the short term, the benefit may be marginal. Patients treated with orthoses are more likely to complain of mild adverse effects and discomfort.

Conclusions

The Cochrane Collaboration and his work, the Cochrane Library, are really relevant instruments to improve EBM in medical practice and thus also in the Rehabilitation Field. The present paper can help Rehabilitation Specialists to easily retrieve the conclusions of the most relevant and updated reviews in order to change their clinical practice in a more rapid and effective way.

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Appendix I

**Acute respiratory infections group:**

Chest physiotherapy for bronchitis in children aged 0-24 months.

**Airways group:**

Educational interventions for asthma in children.

**Exercise and physical therapy for asthma (5 reviews).**

Oxygen therapy during exercise training in chronic obstructive pulmonary disease.

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**Physical training for interstitial lung disease.**

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