RELATIVE EFFICACY OF DIFFERENT EXERCISES IN KNEE AND HIP OSTEOARTHRITIS

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Background: All osteoarthritis (OA) guidelines recommend exercise as one of the core treatments for OA. However, it is unclear whether one exercise is better than another and for which outcome. Due to the limited evidence that compare different types of exercise, we undertook this network meta-analysis (NMA).

Objectives: To determine the relative efficacy of different exercises for pain and self-reported function at (or nearest to) eight weeks.

Methods: Nine electronic databases were searched for eligible randomised controlled trials (RCTs) that compared any types of exercise. The search was first performed in December 2015 and was updated in December 2017. Studies comparing exercise with usual care or with another exercise were included for this NMA. Common comparators such as usual care were used to network different types of exercise. Frequentist NMA was used to estimate the relative effect size (ES), i.e. standard mean difference and its 95% confidence interval (CI).2

Results: 217 RCTs (n=20419) met the inclusion criteria. Of these, 89 trials (n=7070; 97 comparisons) were analysed for pain outcome (figure 1), whilst 87 trials (n=7039; 97 comparisons) were analysed for function. Mind-body exercise was the most effective for pain relief, closely followed by aerobic exercise (See the last row, table 1). Single exercises were consistently better than mixed exercise.

Table 1 Effect size (95% confidence interval) between different exercises

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Mind-body</th>
<th>Body weight</th>
<th>US: synovitis</th>
<th>MRI: bone marrow edema</th>
<th>Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knee pain</td>
<td>0.03</td>
<td>0.03</td>
<td>0.86</td>
<td>0.34</td>
<td>6.22</td>
</tr>
<tr>
<td>RF Discriminant function coefficients</td>
<td></td>
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<td>ROC-curve (AUC=0.92)</td>
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</tbody>
</table>

Table 1: Effect size (95% confidence interval) between different exercises

Conclusions: Knee pain, excessive body weight, synovitis and bone marrow oedema should be considered as key RF predicting knee OA radiological progression.

Disclosure of Interest: None declared


IN HAND OSTEOARTHRITIS, DECREASE IN SYNOVITIS RESULTS IN LESS JOINT PAIN: A LONGITUDINAL MAGNETIC RESONANCE IMAGING STUDY

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Background: Current treatment options to alleviate pain in hand osteoarthritis (OA) are limited in number, efficacy, and safety. Local inflammation and subchondral bone activity are interesting as potential treatment targets, since synovitis and bone marrow lesions (BMLs) have the ability to change over time and were shown to have positive cross-sectional associations with joint tenderness.