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| <b>Title</b>     | Acupuncture for Post-Stroke Rehabilitation  |
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| <b>Reference</b> | Technology Review Report - 005/2015, online:<br><a href="http://www.moh.gov.my/index.php/database_stores/store_view_page/30/261">http://www.moh.gov.my/index.php/database_stores/store_view_page/30/261</a>   |

**Aim**

To review evidence on the effectiveness, safety and cost-effectiveness of acupuncture therapy in post-stroke rehabilitation patients.

**Conclusions and results**

There was high level of evidence on the effectiveness of acupuncture for post-stroke recovery. However, the included trials in most of the systematic reviews have biases due to inappropriate randomised sequence generation, lack of allocation concealment, inadequate level of blinding, poor description of patient withdrawals from the studies and the adverse events and hence, varying the quality of the included trials. Nevertheless, findings from the systematic reviews showed that:

1. Acupuncture seemed to be superior to conventional treatments or provide added value in terms of: Improvement in global neurological deficit [odds ratio (OR)=6.55; 95% confidence interval (CI): 1.89 to 22.76]; Improvement in motor impairment scales, generalized stroke scales, and disability assessment (OR=4.33; 95% CI: 3.09 to 6.08)
2. Scalp acupuncture (SA) seemed to be effective as an adjunct treatment to the conventional care (medication or rehabilitation) in terms of:
  - i. Total efficacy rate:
    - SA plus medication versus medication: [risk ratio (RR)=1.19; 95% CI: 1.05 to 1.36]
    - SA plus rehabilitation versus rehabilitation (RR=1.12; 95% CI: 1.01 to 1.23)
  - ii. Activities of daily living (Barthel Index)
    - SA plus medication versus medication: [standardized mean difference (SMD)=0.78; 95% CI: 0.40 to 1.17]
    - SA plus rehabilitation versus rehabilitation [weighted mean difference (WMD)=13.41; 95% CI: 11.05 to 15.76]
  - iii. Changes in neurological function (Neurological deficit score)
    - SA plus medication versus medication: (SMD=-0.61; 95% CI: -0.81 to -0.40)
3. Electro-acupuncture could be effective in decreasing post-stroke spasticity (Weighted mean difference 0.72; 95% CI: 0.29 to 1.14; p<0.001) compared with usual care or placebo.

4. Acupuncture treatment plus rehabilitation was superior compared with only rehabilitation for the recovery of apoplectic hemiplegia in terms of: Improvement motor function (p<0.05); Improvement activities of daily living (p<0.05)
5. Acupuncture-massage therapy may have curative effects on shoulder-hand syndrome in hemiplegia patients compared to rehabilitation group in terms of: Improvement in numeric pain rating scale (p<0.05); Fewer patients with shoulder-hand syndrome at Steinbrocker stage II or III (p<0.05)

Acupuncture seemed to be relatively safe with minimal adverse events, and there was no retrievable evidence on its cost-effectiveness. The cost per session varies according to scope of treatment ranges between RM 60 to RM 120. However, it was provided free of charge by T&CM unit in several dedicated governmental hospitals.

**Recommendations (if any)**

Based on the above review, acupuncture has the potential to be used as an adjunct therapy in post-stroke rehabilitation patients who are being referred by clinicians. The acupuncture should be conducted by trained personnel.

**Methods**

Electronic databases were searched, which included PubMed, Medline, Journal @ Ovid full text via OVID, OVID EBM Reviews - Cochrane central register of controlled trials, EBM Reviews - Cochrane database of systematic review, Horizon scanning databases - Centre, Birmingham, Australia and New Zealand Horizon scanning (ANZHSN), FDA website, MHRA website and from non-scientific database - Google search engine. In addition, a cross-referencing of the articles retrieved was also carried out accordingly to the topic. Relevant articles were critically appraised and evidence graded using US/Canadian Preventive Services Task Force.

**Further research/reviews required**

Studies on cost-effectiveness is warranted

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