Randomized Controlled Trial of Iyengar Yoga for Chronic Neck Pain

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Background: Chronic neck pain is a significant public health problem with only very few evidence-based treatment options. Complementary therapies such as yoga play an important role in the care of patients suffering from neck pain. As there is growing evidence for the effectiveness of yoga for relieving musculoskeletal pain syndromes, we investigated the effect of Iyengar yoga on chronic neck pain.

Methods: 51 patients (mean age 47.8; 42 female) with chronic non-specific neck pain were randomized to either a yoga group or an exercise group. Patients in the yoga group participated in a 9 weeks Iyengar yoga course, 90 minutes once per week. Patients in the exercise group received a self-care manual containing information on exercises designed by a German health insurance company to relieve neck pain. Patients in both groups were instructed to practice at home for 10 minutes each day during the study period.

Before and after this period, neck pain intensity (100mm visual analog scale; VAS), neck pain specific disability (neck disability index; NDI) and pain related to movement (100mm VAS for 6 movement directions) were assessed. Pressure pain threshold was measured at the individual site of maximum pain and bilaterally at 3 anatomically defined sites (m. levator scapulae, m. trapezius, pars descendens and m. semispinalis capitis). The left and right hand served as control sites.

Results: After the study period, patients in the yoga group reported less neck pain intensity (P=0.004) and neck pain specific disability (P=0.006) compared to the exercise group. No differences between groups were found regarding pain related to movement. Pressure pain threshold was elevated at the site of maximum pain (P<0.001) and bilaterally at 3 anatomically defined sites (P<0.05) only for the yoga group. No differences between groups occurred at the control sites.

Conclusions: The preliminary results suggest that Iyengar yoga is more effective in relieving chronic non-specific neck pain than a self-care manual on exercises. Yoga reduced neck pain intensity and disability, while the changes in pressure pain threshold hint to alterations in pain processing.

Pneumatic Pulsation Therapy for Treating Chronic Neck Pain – a Randomized Controlled Trial on a New Cupping Technique Using a Pulsating Vacuum

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Background: Cupping has been used for centuries in the treatment of musculoskeletal pain syndromes. Pneumatic pulsation therapy (PPT) is a new technique using a mechanically induced pulsating vacuum instead of a constant negative pressure. PPT is thought to combine the effects of cupping with those of massage therapy, both of which have been shown to be effective in the treatment of chronic neck pain.
Objective: To investigate the effect of PPT on chronic mechanical neck pain.

Methods: 50 patients with chronic mechanical neck pain were randomized to either treatment group or a waiting list. Treatment group received 5 PPT treatments over three weeks. Treatment was applied as a combination of stationary and moving cupping using a mechanical device (the Pneumatron, Pneumed GmbH, Germany) to induce a pulsation between negative pressure and atmospheric pressure. During the treatment period patients kept a pain diary. Before and after the treatment period neck pain specific disability (NDI), quality of life (SF-36) and pain related to movement were assessed. To determine changes in hyperalgesia, pressure pain threshold was measured at pain related sites.

Results: Treatment group reported lower neck pain intensity compared to waiting list after the first treatment ($P=0.018$). This effect was maintained until the end of the treatment period, resulting in an overall reduction in neck pain intensity of 34% in the treatment group. Treatment group reported less neck pain specific disability ($P=0.025$) and pain related to movement ($P=0.004$) and improved physical quality of life ($P=0.002$) and role function ($P=0.004$). Pressure pain threshold was elevated only in the treatment group ($P=0.002$), indicating a reduction of hyperalgesia. No serious adverse events were reported.

Conclusions: Physical quality of life was improved while disability and hyperalgesia were decreased after five PPT treatments. The statistically and clinically significant reduction in neck pain intensity suggests that PPT is a safe and effective treatment for chronic mechanical neck pain. Long term effectiveness of PPT should be object of further investigation.

A Lifestyle Program for the Prevention of Alzheimer’s Disease

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Background: Alzheimer’s disease (AD) necessitates a preventive strategy that targets the illness before its clinical symptoms manifest. Increasing evidence suggests that a treatment of AD may always and in principle be too late, and that it is today’s prevention rather than the development of new treatment options that will be most effective in reducing the future generation’s burden of AD.

Method: Therefore, our approach is to develop and comprehensively evaluate the impact of lifestyle modifications on the prevention of AD in order to develop strategies designed to tackle behavioral risks. This Alzheimer prevention program will rest on four pillars: 1) Avoidance of toxins: this will likely include the avoidance of heavy metals, especially metallic mercury, but also lead, aluminum and potentially iron. 2) Appropriate nutrition, potentially by supplementation if necessary: This will likely include micronutrients such as selenium, zinc, B-vitamins, folic acid, and especially the correct ratio of omega 3 to omega 6 fatty acids, as well as a choice of natural foods to obtain these nutrients from. 3) A culture of consciousness: this will included mindfulness, direction and training of attention and appropriate cognitive stimulation. 4) Exercise and physical activity, either through regular sport or other forms of movement.

Conclusion: The relevance of each point will be researched by a series of systematic reviews, some of which have been conducted and some are under way or in planning (published: mercury; finished: selenium, zinc, iron). The lifestyle recommendations will be made publicly available in a form of booklet and its feasibility will be tested in a series of evaluation study, and finally in a series of randomized trials. We hope that such an approach will help contain the worldwide spread of Alzheimer’s disease.

Characteristic and Regularity of Distribution of Traditional Chinese Medicine Syndromes during 1-3 Days, 4-10 Days and 11-30 Days after Onset

Huang Yan

Objective: Investigate the characteristic and regularity of distribution of Traditional Chinese medicine syndromes during 1-3 days, 4-10 days and 11-30 days after onset.