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Introduction

Musculoskeletal pain is the pain that affects the muscles, ligaments, tendons, and bones. Musculoskeletal conditions encompass a spectrum of conditions, from those of acute onset and short duration to lifelong disorders; including osteoarthritis, rheumatoid arthritis, osteoporosis, and low back pain. In surveys carried out in Canada, the United States of America (USA) and Western Europe, the prevalence of physical disabilities caused by a musculoskeletal condition has been estimated at 4% to 5% of the adult population. It increases distinctly with age, and many are influenced by lifestyle factors, such as obesity and lack of physical activity.

Musculoskeletal pain is best treated by treating its cause. Treatment for musculoskeletal pain includes analgesics such as acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs) and opioids. Many forms of complementary therapies exist, such as massage therapy, acupuncture and chiropractic manipulation. Massage therapy, in particular, has grown in popularity. In Malaysia, Malay massage using the concept of deep tissue massage technique has been used as a complementary therapy for musculoskeletal pain.

Deep tissue massage practices the use of hands or mechanical means, to manipulate the soft tissues of the body, particularly muscle. It is claimed that deep tissue massage has potential benefit in relieving musculoskeletal pain by promoting suppleness of the muscle, improving circulation and reducing stress. Malay massage has been offered to patients as a complementary therapy for musculoskeletal pain in several hospitals in Malaysia since 2006 under the Traditional and Complementary Medicine (T&CM) unit which includes Putrajaya Hospital in Federal Territory of Putrajaya, Sultan Ismail Hospital in Johor and Kepala Batas Hospital in Penang.

This technology review was requested by the Director of Traditional and Complementary Medicine Division, Ministry of Health, Malaysia to review the evidence on deep tissue massage as a complementary therapy for musculoskeletal pain.

Objective/Aim

To assess the effectiveness, safety and cost-effectiveness of deep tissue massage as a complementary therapy for musculoskeletal pain.

Results and Conclusions

A total of 580 titles were identified through the OVID interface and PubMed. Two randomized controlled trials, one non-randomized controlled trial and one case report were included in this review.

There was limited fair level of retrievable evidence to suggest that deep tissue massage may be effective in reducing pain in patients with chronic low back pain. Visual Analogue Score (VAS) score difference was found statistically higher in deep tissue massage plus lumbar traction group compared to the lumbar traction only group (1.9 ± 0.9 versus 1.4 ± 0.8 , $P < 0.05$). There were also statistically significant differences in Modified Oswestry Low Back Pain Disability Index (ODI), Quebec Back Pain Disability Scale (QBPD) and VAS score after deep tissue massage in patients with chronic low back pain [ODI $P < 0.001$; QBPD $P < 0.001$; VAS $P < 0.001$]. However, there was a case report of spinal accessory neuropathy and two patients in another study experienced worsening of the low back pain after deep tissue massage. There was no retrievable evidence from the scientific databases on the cost-effectiveness of this technology.

Methods

Literature search was done to search for published articles to assess the safety, efficacy or effectiveness and cost-effectiveness of deep tissue massage as a complementary therapy for musculoskeletal pain. The following electronic databases were searched via OVID Interface: MEDLINE (1946 to 28 February 2015), EBM Reviews-Cochrane Database of Systematic Reviews (2005 to January 2015), EBM Reviews-Cochrane Central Register of Controlled Trials (January 2015), EBM Reviews-Database of Abstracts of Review of Effects (1st Quarter 2015), EBM Reviews-Health Technology Assessment (1st Quarter 2015) NHS economic evaluation database (1st Quarter 2015), Pubmed and INAHTA database. The last search was run on 28 February 2015.