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Efficacy of *Vellarugu Chooranam* with *Thalangai ennai* in the treatment of Knee osteoarthritis and the life style assessed by WOMAC Score

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ABSTRACT

Introduction and Objective: Knee Osteoarthritis (KOA) is a degenerative joint disease and a major public health problem all over the world. It is more prevalent and may be more generalized in women than in men after age of 50 years and one of the leading causes of disability in the elderly. The present study is focused to evaluate the efficacy of *Vellarugu Chooranam* with *Thalangai ennai* in the treatment of KOA and the life style assessed by WOMAC Score.

Method: An open clinical trial was conducted based on American College of Rheumatology classification, 837 KOA subjects were screened and 125 KOA subjects of both genders, aged \geq 40 years were randomly selected at Out Patients Department of Ayurvedic Hospitals in Jaffna District from January 2013 to January 2014. Subjects were received *Vellarugu Chooranam* (1g/ twice a day) with *Thalangai ennai* (external application) over 40 days, with two months follow-up. The modified version of Western Ontario and McMaster Universities Arthritis Index (WOMAC) for Indian use which was the primary outcome variable used to assess the pain, stiffness and self reported life style physical activities such as walking, climbing, kneeling, bedding, and squatting in symptomatic KOA. Data were analyzed by SPSS version 16. This study received ethical approval from Faculty of Medicine, University of Jaffna, and registered at SLCTR (No: SLCTR/ 2012/ 009).

Results: There were 91 (72.8%) female and 34 (27.2%) male with a mean age of 57.10 (SD \pm 8.81) years. In this study subjects, 69 (55.2%) had unilateral and 56 (44.8%) had bilateral KOA. Among these subjects, 109 (87.2 %) were non vegetarian; 28 (22.4%) had poor appetite; 62 (49.6%) used mats to sleep; 57 (45.6%) had poor night sleep due to knee joint/s pain; 29 (23.2%) had irregular bowel movement; 90 (72%) used the squatting pan for defecation; 107 (85.6%) used normal water for bathing; 7 (5.6%) had daily physical exercise regularly and 31 (24.8%) had lifting heavy weight regularly. Overall, there was highly significant differences (P=0.000) observed in terms of change of the total WOMAC scores of pain, and stiffness. There was also highly significant improvement (P=0.000) in routine life style activities between baseline and end of the treatment as well as end of the 2nd follow-up. Safety was good and no side effects or adverse effects were observed during the treatment.

Conclusion: The present study results show highly significant improvements in the treatment of KOA condition and the quality of life. The *Vellarugu Chooranam* with *Thalangai ennai* remedy has been proven to be a good alternative medicine for the treatment of KOA.

Key words: Life style, Herbal medicine, Knee osteoarthritis, Treatment, WOMAC index

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