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### A goniometry assessment on the efficacy of Vellarugu Chooranam with Thalangai Ennai in the management of knee osteoarthritis: an open clinical trial

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#### Introduction and Objectives

The Knee Osteoarthritis (KOA) is a major public health problem all over the world, especially in the elderly women than in men and its prevalence is higher in Asians populations.

This trial is focused on finding the effectiveness of *Vellarugu Chooranam* with *Thalangai Ennai* in the management of KOA by the Goniometer.

#### Method

An open, randomized clinical trial was conducted based on American College of Rheumatology classification, 125 KOA subjects of both genders, aged  $\geq 40$  years were selected at Siddha Hospitals in Jaffna District from January 2013 to August 2014. Subjects were received Siddha formulation {1g of *Vellarugu Chooranam* (2 capsules/twice a day) with *Thalangai Ennai* (external oil application)} over 40 days. There are four interventions and two follow-up arms. The Goniometer (0-360°) was used to assess the Range of Movements (ROMs) as flexion and extension in supine and prone positions in the diagnosed KOA and also includes the adverse and side effects regarding the treatment of KOA. Data were analyzed by SPSS version 17 using the paired student t-test to assess ROMs.

This study was registered at SLCTR (No: SLCTR/2012/009).

#### Results

There were 91(72.8%) female and 34(27.2%) male with a mean age of  $57.10 \pm 8.81$  (M $\pm$ SD) years. In these KOA subjects, 69(55.2%) had unilateral, 56(44.8%) had bilateral and 65(52%) had duration of KOA for 1year. Overall results, highly significant reduction (P<0.000) observed in the Goniometer assessment of ROMs between baseline and end of the treatment. Over all, the knee flexion and extension were improved by 20.1% and 38.5% at the end of follow-up respectively.

#### Conclusion

The goniometry assessment shows a significant improvement in the ROMs of KOA.