

# ***Influence of elastic bandage and neoprene sleeve on knee position sense and pain in subjects with knee Osteoarthritis***

## **Abstract**

**Introduction:** to investigate whether a neoprene sleeve and elastic bandage around the knee joint of subjects with knee osteoarthritis (OA) would, in short term (a) reduce pain (b) improve knee joint position sense and comparison of their effect with each other if they have.

**Materials & Methods:** In a semi-experimental study, 30 subjects (11 men, 19 women, age between 33-75) with unilateral knee OA. Subjects had to have at least 2cm from 10cm visual analogue scale (VAS) of knee pain for study entry. All patients were randomly assigned to either an elastic bandage or a neoprene sleeve. One week later they were assigned to the opposite selection. Joint position sense was assessed in the sitting position using an electrogoniometer and pain by VAS where 0cm equals no pain and 10 cm equals worst pain. Knee pain and JPS were assessed for each selection one week apart. During each visit assessment were performed at baseline and after 20 min of bandage/neoprene sleeve application.

**Findings:** the mean of scores for knee variables JPS and VAS was taken and paired-t test and Wilcoxon signed rank test was employed to calculate the different between two trails. Neoprene sleeve had significant effect on knee JPS ( $P=0.037$ ). But elastic bandage had no effect ( $P=0.631$ ). Both of them had significantly reduced knee pain. ( $P=0.000$ )

**Conclusion:** In subjects with both neoprene sleeve and elastic bandage reduced knee pain with more effect of neoprene sleeve. Only the neoprene sleeve had effect on knee JPS.

**Key words:** proprioception/ osteoarthritis/ knee/ neoprene sleeve/ bandage

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