194. PATIENTS WITH KNEE OSTEOARTHRITIS DEMONSTRATE IMPROVED GAIT PATTERN AND REDUCED PAIN FOLLOWING A NON-INVASIVE BIOMECHANICAL THERAPY: A PROSPECTIVE MULTI-CENTRE STUDY IN AN ASIAN POPULATION

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Background: Previous studies have shown the effect of a unique therapy with a non-invasive biomechanical foot worn device (AposTherapy) on Caucasian western population suffering from knee OA. The purpose of the current study to evaluate the effect of this therapy on the level of symptoms and gait patterns in a multi-ethnic Asian population suffering from knee OA.

Methods: Fifty-eight patients with bilateral medial compartment knee OA participated in the study. All patients underwent a computerized gait test and completed two self-assessment questionnaires (WOMAC and SF-36). The biomechanical device was calibrated to each patient and therapy commenced. Changes in gait patterns and self-assessment questionnaires were reassessed after 3 and 6 months of therapy.

Results: A significant improvement was seen in all of the gait parameters following 6 months of therapy. Specifically, gait velocity increased by 15.9%, step length increased by 10.3%, stance phase decreased by 5.9% and single limb support phase increased by 2.7%. In addition, pain, stiffness and functional limitation significantly decreased by 68.3%, 66.7% and 75.6%, respectively.

Conclusion: The multi-ethnic Asian population with medial compartment knee OA demonstrated improved gait patterns, reported alleviation in symptoms and improved function and quality of life following 6 months of therapy with a unique biomechanical device.

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