IMMEDIATE EFFECT OF UNILATERAL USE OF TEXTURED INSOLE ON WEIGHT-BEARING SYMMETRY AND GAIT PARAMETERS IN PATIENTS WITH CHRONIC STROKE.

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ABSTRACT

INTRODUCTION

Weight-bearing asymmetry is one of the main causes of disturbance in the ability of balancing in patients with hemiparesis and could cause standing problems and gait abnormalities for them. The purpose of this study was to investigate the immediate effects of unilateral textured insoles on symmetry of weight bearing during standing and gait parameters of patients with chronic stroke.

MATERIALS AND METHODS

In this quasi-experimental study, sixteen patients with hemiparesis were selected by simple non-probability method. These patients had an average age of 52.12 (±6.94) and the average of post-injury duration was 33.12 (±16.4) months. Symmetry index during standing position (by using two equal weighting scales), symmetry of step length, step length and walking velocity (by using NeuroCom Balance Master Device) was measured in three conditions: Without insole, textured insole with shore A-80 and textured insole with shore A-60.

RESULTS

This study showed that using a textured insole with shore A-80, significantly improves symmetry index (p = 0.022) and step length symmetry (p = 0.004) in compare to not using any insole while there was not a notable difference between non-insole and textured insole with shore A-60 conditions. Velocity of walking and step length was not meaningfully improved in any of the conditions.

CONCLUSION

Unilateral use of textured insole with shore A-80 under the unaffected side could immediately improve weight bearing symmetry and step symmetry in patients with chronic stroke.

CITATION


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KEYWORDS

NeuroCom, Hemiparesis, Chronic stroke, Symmetry index.