

LETTER TO THE EDITOR

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Comment to “The effects of Kinesio taping of lower limbs on functional mobility, spasticity, and range of motion of children with spastic cerebral palsy” by Mirjavad Tabatabaee et al.

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Dear Editor,

Introduction

We read the article with interest titled “The effects of Kinesio taping of lower limbs on functional mobility, spasticity, and range of motion of children with spastic cerebral palsy” published in *The Egyptian Journal of Neurology, Psychiatry and Neurosurgery* on 29th October (2019) 55:70 [1]. We want to commend the authors for this useful clinical study and a significant contribution towards the body of scientific knowledge related to evidence-based cerebral palsy (CP) rehabilitation. The study evaluates the effect of Kinesio taping (KT) in children with spastic CP. The study population comprises diplegic and quadriplegic CP children equally allocated into two groups. Group A received conventional therapy plus sham KT, whereas Group B received conventional plus real KT. The study uses goniometric measurements for the joint range of motion, Modified Ashworth Scale for spasticity, and Timed Up and Go Test for functional mobility of the lower limbs. Although the introduction, research design, and statistical analysis are plausible,

there are few methodological concerns in the article which need to be addressed by the authors.

Main text

First, the authors did not perform a power analysis to determine the optimal sample size compromising the internal validity of the study. Second, the KT was applied for 24 h and continued for 4 days, such prolonged use can deteriorate the adhesive property of KT with time or if it comes in contact with water during hygienic activities. Third, an electromyography study revealed the positive facilitatory effects of KT when applied over quadriceps muscle for 24 h [2]. However, the inhibitory effect of KT on muscle when applied without tension lacks scientific evidence. Fourth, the study used Timed Up and Go test to evaluate functional mobility. Test usage is limited due to a lack of validation studies in the CP population. However, validated and reliable functional evaluation tools are available for children with CP such as the Functional Mobility Scale [3] and expanded and revised Gross Motor Function Classification System [4]. Fifth, the authors conclude that there is no significant difference between the control and experimental group. Both the groups received KT; the experimental group received KT with proper technique, whereas the control group received KT with sham technique. Therefore, both groups would receive the beneficial effect of tactile stimulation due to the application of KT over the

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skin [5]. The tactile stimulation by KT, when applied over the dermatome of the affected muscle group, would result in facilitation to the corresponding myotome through a monosynaptic spinal reflex [6].

Conclusion

The study adds an important complementary therapy that would augment the effect of interventions in CP rehabilitation. The study opens the door to investigate the facilitatory and inhibitory effects of KT by electromyographic studies.

Abbreviations

KT: Kinesio taping; CP: Cerebral palsy

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Authors' contributions

FZK conceived the idea and drafted the manuscript. MA assisted with developing the manuscript by adding supporting articles with respect to the intellectual content. Both authors read and approved the final manuscript.

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Availability of data and materials

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Ethics approval and consent to participate

Not applicable

Consent for publication

All authors consent for publication

Competing interests

The authors declare that they have no competing interests.

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