Kinesiotape and Congenital Muscular Torticollis
Laura Matrisciano, Jay Nicholson, Ryan Scinta, & Spencer Fuehne

Background
- Congenital Muscular Torticollis (CMT): Shortening or contraction of sternocleidomastoid muscle as a result of positioning in utero\(^1\)
- Kinesiotape (KT) can be used to increase muscle performance and normalize muscle function to aid in correction of possible articular mal-alignments\(^3\)
- APTA suggests a clinical practice guideline for managing CMT through the use of kinesiology tape as an adjunct to other interventions to improve postural symmetry\(^2\)

PICO Question
In infants presenting with Congenital Muscular Torticollis, does the use of kinesiotape on the contralateral SCM increase cervical AROM and decrease ipsilateral SCM muscle shortening in resting position when compared to traditional therapy using stretching and exercise?

Methods
- Filters applied: within 5 years, human subjects, full text available.
  - EBSCOHost: Key words “congenital torticollis” and “taping.” Returned 3 results.
  - CINAHL: Key words “torticollis” and “taping.” Returned 1 result.
- Filters applied: since 2015, full text available.
  - Google Scholar: Key words “congenital muscular torticollis kinesiotaping.” Returned 10 results.
Research Synthesized

- Research Found but not used:
  - 2 Case Reports
  - 3 Outcomes Research
  - 1 Scoping Review
  - 1 Case Report

- Research Used:
  - 2 RCT
  - 1 Crossover Study
  - 1 Outcomes Research
  - 1 Case Study

Results

Supporting Evidence:
- Applying KT can increase power output for improved physical-performance tests\(^1\)
- KT helps decrease muscle imbalance short term when applied to contralateral SCM\(^1,5\)
- MFS scores significantly decreased on the affected side after the use of KT, while significantly greater scores were found on the unaffected side\(^1,5\)
- Infants with no symptoms of CMT experienced no changes in MFS scores when using KT compared to not using KT\(^1\)

Refuting Evidence:
- Adding KT to traditional exercise showed no significant improvement compared to traditional exercise alone\(^2\)

Discussion

- KT has an immediate effect on muscular imbalance in infants with CMT\(^1,5\)
- There is no short-term effect of KT on contractile properties and muscle performance in young elite soccer players\(^3\)
- For infants with congenital muscular torticollis, kinesiology taping applied on the affected side had an immediate effect on the MFS scores for the muscular imbalance in the lateral flexors of the neck\(^4\)

Need for Future Research

- Investigate short and long-term effects of taping in CMT\(^1,5\)
- Larger sample size of the CMT population\(^2\)
- Establish treatment duration recommendations for kinesiotaping in CMT\(^2\)
- Investigate if KT tape can decrease treatment time\(^1,4\)
PICO ANSWER

• Based on our literature review, we conclude that there is insufficient evidence to support or refute the use of KT on contralateral SCM to increase cervical AROM and decrease ipsilateral SCM muscle shortening in resting position in comparison to traditional therapy in infants presenting with CMT.
• Further research is necessary to prove the positive long-term and short-term effects of this treatment to be considered evidence based therapy.

Clinical Application

• When treating a patient with CMT, taping should be used as an adjunct to other traditional therapies (stretching and exercise) in order to assure patient is receiving best treatment.
• According to Giray, there will be no changes in MFS scores when applying tape to an infant without CMT; therefore KT will do no harm.

References