

Use of Kinesio Tape in Pediatrics to Improve Oral Motor Control

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Martin, P. (2003). 18th Annual Kinesio Taping International Symposium Review. Tokyo, Japan: Kinesio Taping Association.

The use of Kinesio Tape in pediatrics has become more widespread over the past year. As a result of input from several therapists, we have begun taping trials with a few select children at Cleveland Clinic Children's Hospital for Rehabilitation. As a result of these trials, we hope to initiate research or case studies in this area.

Dr. Kase in the Kinesio Taping Perfect Manual has outlined taping techniques for TMJ pain. These include techniques for pain with chewing and difficulty opening the mouth due to pain. Children with neurological disorders, developmental delay and dysarthria often present with difficulty with mouth closure, resulting in increased drooling, poor articulation, and hypermobility in the TMJ.

Trials of Kinesio Tape have been used with children who present with decreased oral motor control using the following techniques for TMJ stabilization, jaw stability to decrease drooling, and jaw stabilization for better lip closure.

About one year ago, I began working with a few therapists, including a speech therapist at City Kids, in Chicago, taping TMJ (temporomandibular joints) for stability. On one child with asymmetrical TMJ mobility, the hypermobile joint was taped to limit hypermobility and more symmetrical jaw movement was observed. Two 1" pieces were cut and used in an "X" as a corrective technique over the TMJ.

Another child was taped to provide jaw stability in the hope of decreasing drooling. His mouth was held open at rest and drooling was excessive and continuous, often causing wetness down the front of his shirt. Tape was applied over the TMJ joint and extended in a "Y" to the upper and lower jaw. A 2" piece of tape was cut in a "Y", anchored at the TMJ with one tail laid down toward the mouth and the other toward the lower jaw. After four months, this therapist noted an improvement in mouth position at rest and a significant decrease in drooling. Per therapist, clothes no longer became

moist from saliva.

The orbicularis oris is the major muscle responsible for lip closure. This is generally a weakened muscle, due to overstretch from poor closure, head and neck position and poor alignment, and muscle imbalances. Children with varying diagnoses, including cerebral palsy, developmental delay, and dysarthria have been taped. Two 1” strips of tape, about three to four inches long are cut. The child is asked to open the mouth all the way. Tape is applied from the center of the upper lip (tearing the center of the tape) with paper-off tension only, above and outlining the upper lip. The same is done below the lower lip.

Examples of taping for lip closure:

One four-year-old boy with cerebral palsy drooled a great deal, requiring wiping of his mouth a minimum of 12 times a session. With tape applied to the orbicularis oris, drooling during the session decreased, with minimal drooling, requiring wiping of his mouth only once a session. After 45 to 60 minutes, he seemed to tire and tolerance of tape decreased. Time in tape was gradually increased to a few hours, to include mealtimes at home. Awareness of drool also improved in a four-year-old girl with cerebral palsy and increased lip closure to capture drool was observed.

Taping for lip closure may not only decrease drooling, but may improve tongue lateralization as evidenced by the production of bilabial sounds. A nine-year-old girl with cerebral palsy and dysarthria had a significant decrease in drooling at rest, and during eating she showed improved tongue lateralization as well. She was also able to produce bilabial sounds, including “b”, “m”, and “t” much more accurately. A four-year-old boy with developmental delay with a tongue thrust was able to keep his lips closed for two minutes without a tongue thrust, much longer than without tape.

In general, the use of Kinesio Taping to improve lip closure needs to be further explored. The mechanism of impact may be primarily sensory, or may involve facilitation of the orbicularis oris. I believe Kinesio Tape provides another tool for use in the therapeutic treatment of children with oral motor concerns. I would like to thank the staff at Cleveland Clinic Children’s rehab, as well as the staff at City Kids, Inc. in Chicago, for their input, interest and support. Cleveland Clinic children’s Rehab therapists involved in this informal study include: Stefanie Orkin, MACCC-SLP, Tracy Biller, MACCC-SLP, Carolyn Leitch, OTR/L, Laurie Williams, OTR/L, and Kathy Chippi, PT.

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