

Use of kinesiology taping in different diseases

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ABSTRACT

Kinesiology taping, called in Poland more and more often dynamic plastering is a method with a very wide application. More and more often this method is noticed among patients. Currently, many studies have been conducted, in which the effectiveness of therapy with the use of tapes for kinesiology taping has been proven. What is more, no harmful effects of this form of therapy have been found. In addition, there is more and more research showing the effectiveness of cathodiology taping as a form of supporting the effects of the main therapy. The paper was written on the basis of review articles and research papers presented in reputable Polish magazines dealing with physiotherapy.

Key words: kinesiology taping, kinesio taping, taping, physiotherapy

INTRODUCTION

In the 1970s, Japanese-based chiropractor Dr. Kenzo Kase observed the effect of inflexible tapes on the site of the injury on athletes, saying that they were the cause of adverse

reactions due to compression of tapes at the site of the injury. When he and a group of scientists developed a tape that resembled human skin in its thickness, weight and stretch properties, it was a breakthrough in modern physiotherapy, and the method was called Kinesio Taping. An unquestionable advantage of this method is its effect on the patient for 24 hours, which is already noticeable immediately after the tape is applied and remains after they are peeled off. The tapes are cotton, covered with medical acrylic, are permeable to water and air, as well as water-resistant. The designed tapes, after appropriate application on the patient's body, were designed to affect changes in the subcutaneous tissue and improve lymph circulation. This was made possible by the special construction of the tape, which allowed for proper stimulation of the epidermal layers. The philosophy of the method is to restore the patient's optimal mobility through the operation of a number of biological processes. The most important therapeutic effects after proper application depending on the technique are: improvement of microcirculation, muscle tension and lymph flow, support of joint function, reduction of pain and maintenance of correct joint position.¹²³⁴

In the last few years there have been many scientific papers on the method of kinesiology taping. What is more, new research is being conducted all the time, which will be published soon, there is no indication that this trend will change. Nowadays, more and more often we notice research aimed at studying the influence of the method of kinesiology taping, as it supports other methods. The paper presents selected possibilities of application of the method of kinesiology taping on the basis of research published in reputable Polish magazines dealing with physiotherapy issues.

MAIN PART

Morel et al. in their work "Ocena kontroli głowy u dziecka z cztero kończynowym mózgowym porażeniem po aplikacji taśm kinesiotalping na mięsień prostownik grzbietu" performed a study on a boy at the age of two years. The aim of their work was to test how the method of kinesiology taping affects the control of the head of a child who reached level V of GMPCS. The test person was subjected to a cycle of application of kinesiology tapes. 10

1 Śliwiński Z, Krajczy M. Dynamiczne plastrowanie podręcznik Kinesiology Taping. Markmed Rehabilitacja. Wrocław 2014.

2 Mikołajewska E. Kinesiotalping. Rozwiązania wybranych problemów funkcjonalnych. PZWL. Warszawa 2015.

3 Kiebzak W, Kowalski I. Wykorzystanie metody Kinesiology Taping w praktyce fizjoterapeutycznej: przegląd literatury. Fizjoterapia Polska 2012; 1: 1-11.

4 Skonieczna - Zydecka K, Kruszyniewicz J. Kinesiology Taping jako propozycja postępowania fizjoterapeutycznego w sporcie. Praktyczna fizjoterapia i rehabilitacja 2016; 68: 41-48.

applications of 3 days duration were performed throughout the entire duration of the study. Each application was followed by a 24-hour break to regenerate tissues. A functional application was applied to the therapy, which was applied on both sides of the spine rectifier muscle. The tapes were applied with 50% tension in the cephalothorax direction. The child was measured before and after the examination. Based on the results of the study, the authors came to the conclusion that the method of kinesiology taping has an impact on the head control in the examined child with cerebral palsy. It improves the height of the head lift and the duration of the lift.⁵

Krajczy et al. in the paper "Zastosowanie plastrowania dynamicznego w fizjoterapii zaburzeń czynnościowych układu ruchowego narządu żucia" presents the possibilities of using tape in the treatment of functional disorders of the masticatory system. At the very beginning, the authors recommend that the diagnostic process be carried out by means of appropriate screening and clinical, as well as muscle and skin tests. The method of kinesiology taping in physiotherapy of functional disorders of the masticatory system has its application in the reduction of pain and swelling. To reduce swelling and inflammation, the authors recommend the use of lymphatic application in acute periods (fan type, with 0% tape tension). Other applications suggested by the authors are the Y type application (base around the angle of the mandible, upper tail towards the nose and lower tail towards the chin) and the application for trigger points based on the use of ligament technique (application type I). According to the authors, kinesiology taping will work well in the treatment of functional disorders of the locomotive system of the masticatory system, however, it is necessary to perform a detailed diagnosis in each case and have a cooperation between a dentist, physiotherapist, orthopaedist.⁶

Dreżewska et al. in the paper "Ocena wpływu dynamicznego plastrowania na zmianę wybranych cech motorycznych u tancerek hipermobilnych" examined 44 jazz dancers aged 18-25 years who reported pain in the lower part of the body. The group studied for 3 weeks was subjected to the kinesiology taping method with weekly change of the tape to a new one. The following muscles were treated: widest back, quadrilateral lumbar, pear-shaped, medium to large buttocks, hip-lumbar, straight thighs, rear thigh muscles, broad fascia tensioner and adductor group. In all muscles, apart from the widest back, straight thigh and broad fascia

5 Morel S, Curyło-Babiuch E. Ocena kontroli głowy u dziecka z cztero kończynowym mózgowym porażeniem po aplikacji taśm Kinesiotaping na mięsień prostownik grzbietu. *Rehabilitacja w praktyce* 2019; 1: 58-62.

6 Krajczy M, Bogacz K. Zastosowanie plastrowania dynamicznego w fizjoterapii zaburzeń czynnościowych układu ruchowego narządu żucia. *Rehabilitacja w praktyce* 2016; 4: 47-50.

tensioner, a positive effect on the improvement of muscle strength was found. The measurements were taken before and after the end of the therapy.⁷

Mielańczyk et al. in the paper "Wpływ Kinesio Tapingu stopy na stabilność posturalną i asymetrię obciążenia kończyn dolnych" investigating a group of people with asymmetrical lower limb load came to the conclusion that Kinesio Taping method contributes through application to the sole of the foot to improve the symmetry of lower limb load. However, it has no effect on the reduction of postural instability when standing on the right and left leg. The authors used Kinesio Taping application on the underloaded sole of the foot, spatial technique with the voltage of 50%. The duration of the therapy was 4 weeks. Patients were applied for 3 days, followed by a 2-day break to reapply the application.⁸

Grobelna et al. in the work "Zastosowanie masażu i Kinesio Tapingu u kobiet w ciąży" recommend the combination of massage and kinesio taping. In pregnant women, the authors recommend using taping cathode ray in order to strengthen abdominal muscles, support breathing, reduce pain e.g. in the spine, reduce swelling e.g. in the lower limbs.⁹

Mikołajewska, based on the philosophy of Dr. Kenzo Kase, believes that anyone who has adequate training in the method of kinesiology taping, both theoretical and practical, can independently develop appropriate applications for different diseases at different stages of therapy.¹⁰

Kiebzak et al. in the paper "Wykorzystanie metody Kinesiology Taping w praktyce fizjoterapeutycznej: przegląd literatury" analyzed 87 scientific publications on the subject of kinesiology taping. After careful analysis it was noticed that in all the works the method of kinesiology taping is assessed as effective. In addition, it was noted that in 87 papers analyzed there is no mention of the harmfulness of kinesiology taping and its side effects.¹¹

Krajczy et al. in the paper "Przegląd piśmiennictwa na temat możliwości zastosowania plasterowania dynamicznego Kinesiology Taping (KT) w chorobach wewnętrznych: w chirurgii, kardiologii i pulmonologii" after the analysis of the papers note that in recent years there has been a greater number of papers on the subject, however, a large part of research on

7 Drężewska M, Frączek E. Ocena wpływu dynamicznego plasterowania na zmianę wybranych cech motorycznych u tancerek hipermobilnych. *Fizjoterapia Polska* 2016; 1: 6-22.

8 Mielańczyk J, Dębski P. Wpływ Kinesio Tapingu stopy na stabilność posturalną i asymetrię obciążenia kończyn dolnych. *Rehabilitacja w praktyce* 2015; 2: 38-41.

9 Grobelna A, Drozd A. Zastosowanie masażu i Kinesio Tapingu u kobiet w ciąży. *Rehabilitacja w praktyce* 2018; 3: 41-49.

10 Mikołajewska E. Kinesiotaping. Rozwiązania wybranych problemów funkcjonalnych. PZWL. Warszawa 2015.

11 Kiebzak W, Kowalski I. Wykorzystanie metody Kinesiology Taping w praktyce fizjoterapeutycznej: przegląd literatury. *Fizjoterapia Polska* 2012; 1: 1-11.

kinesiology taping is carried out in too small groups, and only a few papers can be classified as papers that meet the criteria for papers based on scientific facts.¹²

SUMMARY

The results of the research presented in the paper based on the collected literature provide physiotherapist or potential patient with a wide range of physiotherapy options for many diseases by means of kinesiology taping. The physiotherapist is able to reduce pain, improve joint mobility, improve quality of life, accelerate regeneration, reduce swelling, accelerate the process of physiotherapy. In addition, the method of kinesiology taping used simultaneously with other physiotherapeutic methods according to research increases their effectiveness. What is more, the method of kinesiology taping is a relatively cheap tool in the hands of a physiotherapist. However, before it is used, it is necessary to take into account the indications and contraindications to perform the procedure, and perform screening tests to be able to adapt the therapy to the individual needs of the patient. It is worthwhile to continue research into the use of CRT as a method that will support other physiotherapy/physiotherapy methods in different diseases.

CONCLUSIONS

1. Kinesiology taping can be used in children with cerebral palsy in time and improve the height of head elevation.
2. Kinesiology taping can be successfully used in people with functional disorders of the locomotive organs of the masticatory system.
3. Kinesiology taping has a positive effect on the change in muscle strength values.
4. Kinesiology taping feet improves the symmetry of the load of the lower limbs.
5. The use of the method of kinesiology taping together with massage in pregnant women brings positive results.
6. It is worthwhile to conduct more research on kinesiology taping as a method supporting a different physiotherapeutic/physical method in different diseases.
7. Kinesiology taping is a method used for a very wide range of applications in many diseases.

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