

Kinesiotherapy as a method supporting the rehabilitation of lumbosacral spine pain in pregnant women

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Summary

During pregnancy, a number of changes take place in the woman's body. They often cause pain in the spine, especially the lumbosacral segment. Dynamic slicing supports the rehabilitation of women during pregnancy, thanks to the fact that it has an analgesic effect, improves the flow of limes and increases the elasticity of tissues. Kinesiotherapy included in the rehabilitation is an effective method of pain relief in this area in pregnant women.

Keywords: Kinesiology taping, pregnancy, spine pain, lumbosacral segment, physiotherapy

Introduction

In Asian countries, the kinesiology taping has been used since the 1970s. Then taping began to be used in the US, and then the method also reached European countries. In Poland, this method of rehabilitation support is available and widely used since 2004 in athletes therapy and physiotherapy of other diseases [1,2]. Dynamic slicing by affecting different types of receptors on the skin shows analgesic effect, has a beneficial impact on the lymphatic system, reducing swelling and improving the flow of limes. Medical taping improves the healing process, increases tissue elasticity including scars [3]. To make the application with tapes,

cotton stretchy plasters covered with hypoallergenic glue, which is activated by heat are used [4,5]. The elasticity of the patches is similar to the physiological elasticity of the muscles and the physical characteristics of the tapes correspond to the parameters of human skin [6,7].

During pregnancy, a number of changes occur in the woman's body, including hormonal, physical and biomechanical levels. There is often spine pain - especially of the lumbosacral segment, which is caused by the increased abdominal wall, loosening of the ligament-capsule apparatus, shifting the center of gravity of the body, mass of the growing child, uterus and fetal waters. Other problems on the part of the locomotor system that the pregnant woman's body has to face are the separation of the rectus abdominis muscles, the swelling of the lower limbs, and the breast soreness. By using kinesiological patches, you can support the rehabilitation and treatment of the abovementioned ailments [8, 9].

The objective of the work

The aim of the work is to check whether the application during the rehabilitation of pregnant women of applications with the use of kinesiological patches, affects the reduction of various ailments of the musculoskeletal system and lymphatic system. A literature review has been carried out to check the effectiveness of the applications used.

Pain in the lumbosacral spine and kinesiotaping.

The pain of the lumbosacral spine can arise after overloading as a result of an intervertebral disc herniation, as a consequence of organic changes within the spine and soft tissues [10]. The pain of the lumbosacral segment is currently one of the most frequent issues from the locomotor system also in pregnant women [12,13]. In pregnant women, it is caused by a rapid increase in body weight, transfer of the center of gravity, whose new position disturbs the current balance, asymmetry in the mobility of the sacroiliac joints, irritation of the pelvic ligaments, a mass of the growing uterus and fetal weight. In the treatment of pain symptoms of the lumbosacral segment, physical rehabilitation, pharmacotherapy under close medical or midwife's supervision, hydrotherapy, massage and medical taping are recommended [14]. Motylewski and others [11], undertook to evaluate the effectiveness of physical activity in relieving lumbar spine pain in pregnant women. The study was conducted in a group of 41 women. They were subjected to the abovementioned treatments and the effectiveness of rehabilitation was evaluated. The respondents assessed that the most effective method of controlling spine pain was successive: physical activity (47.4%) water exercises (21%), pregnancy massage (15.8) and kinesiotaping (15.8%) [11]. Mikołajczyk et al. [12] investigated the impact of traditional physiotherapy and Medical Taping methods on pain and the degree of dysfunction of patients with lumbosacral spinal pain syndrome. We examined 40 people who were rehabilitated using traditional physiotherapy and 40 people who used the application with the use of patches. In both groups, the pain that accompanied patients before and after rehabilitation was assessed using the VAS scale. It has been reported to reduce spinal pain, which indicates the effectiveness of treatment with patches [12]. Women who were physically active before and during pregnancy were less likely to complain of pain. Observations by the authors also showed that women are reluctant to seek help from specialists - they prefer to rest and to reduce physical activity [13]. Szypuła et al. [15] studied the influence of "slicing" treatments in patients suffering from lumbar spine pain. All 14 patients achieved a significant reduction in pain [15]. A significant improvement in the study of the effectiveness of kinesiotherapy in pregnant women who complained of L-S episode pain was also obtained by Chobot A. [16] and Lewandowska E. [17]. Medical taping is widely used in the rehabilitation of pregnant women. In addition to the "slicing" of the lower spine in pregnant women, the following applications are made: preventing the separation of

abdominal muscles, reducing swellings - including lower limbs, pain relief at sciatica, relieving pain in other parts of the spine, supporting the pregnancy belly. Encouraging women to be physically active and to consult a physiotherapist can have positive effects on the prevention of low back pain [13, 17]. Rehabilitation is an alternative to pharmacotherapy [18].

Conclusions

1. In the rehabilitation of pain in pregnant women, physical exercises, properly selected physical treatments and kinesiology taping are used.
2. Application of the patches is an effective method of reducing lumbosacral pain in pregnant women.

Bibliography

1. Gniewek M. Hałasa - Majchrzak D, Karczewska E et all. Zastosowanie metody kinesiotaping w usprawnianiu neuropatii obwodowej kończyny górnej wywołanej uciskiem mięśniowo - powięziowym. Rehabil Prakt. 2014; 5:48-53.
2. Mikołajewska E. Kinesiotaping. Rozwiązania wybranych problemów funkcjonalnych. Warszawa PZWL; 2011.
3. Mosiejczuk H, Lubińska A, Ptak M et all., Kinesiotaping as an interdisciplinary therapeutic metod. Pomeranian J Life Sci. 2016;62(1):60-66.
4. Mikołajewska E. Hipoalergicznosc plastrów do kinesiotapingu – opis przypadku. Prakt Fizjoter Rehabil. 2010;6:48-51.
5. Zajt-Kwiatkowska J, Rajkowska -Labon E, Skrobot W et all. Application of kinesio taping for treatment of ports injuries. Res Yearbook 2007;13(1):130-4.
6. Gonzales - Iglesias J, Fernandez -de -Las -Peñas C, Cleland J et all., Short -term effects of cervical kinesiotaping on pain and cervical range of motion in patients with acute whiplash injury: A randomized clinical trial. J Orthop Sports Physther 2009; 39(7):515-21.
7. Kiebzak W, Kowalski M, Pawłowski M, Gąsior J et all. Wykorzystanie metody kinesiologytaping w praktyce fizjoterapeutycznej: przegląd literatury. Fizjot Pol. 2012;12(1):1-11.
8. T. Senderek, Breitenbach S, Hałas I. Kinesiotaping – nowe możliwości fizjoterapii kobiet w czasie ciąży. Fizjot Pol. 2005; 5(2): 266-271.
9. Słomko W, Zamojska P, Dzierżanowski M. Physiotherapy in the postpartum problems. J Education Health Sport. 2017;7(4):323-333.
10. Wójcik G, Piskorz J. Niecharakterystyczny ból imitujący lewostronną rwę kulszową – opis przypadku. Med Og Nauk Zdr 2015: 21 (3) 240–243.
11. Motylewski S, Terka D, Poziomska- Piątkowska E. Assessment of physical activity effectiveness in pain alleviating of the lumbar spine pain during pregnancy. Fizjoter Pol 2017; 17(4): 34-40
12. Mikołajczyk E, Jankowicz-Szymańska A, Bakalarz J. Wpływ tradycyjnej fizjoterapii oraz metody Medical Taping na dolegliwości bólowe i stopień dysfunkcji pacjentów z zespołem bólowym odcinka lędźwiowo-krzyżowego kręgosłupa.
13. Miksza A, Smolarek N, Chmaj-Wierzchowska K et all. Spine ailments in lumbosacral part in pregnant women. Polski Przegląd Nauk o Zdrowiu. 2017; 1(50) 117 –123.
14. Urtnowska K, Bułatowicz I, Ludwikowski G. Massage during pregnancy – indications, contraindications, general principles for performing the treatment.FP 2017; 17(1) 88-94
15. Szypuła J, Żęgota Z, Cherkowska M. Zastosowanie metody plastrowania dynamicznego (kinesiology taping) w leczeniu zespołów bólowych odcinka lędźwiowego kręgosłupa. Kwart Ortop 2010;1:130-136.
16. Chobot A. Kinesiology Taping – nowy sposób uśmierzania bólu kręgosłupa? 2013;14(2):14-17.

17. Lewandowska E, Witkoś J, Wróbel P et al. The influence of kinesitherapy and kinesiology taping to reduce pain in the lumbar part of spine in pregnant women. *Ostry Dyżur* 2016; 9(1) 23-29.
18. Majchrzycki M, Mroziakiewicz P, Kocur P et al. Low back pain in pregnant woman. *Ginekol Pol.* 2010; 81:851-855.
19. Bojczuk T, Przysada G, Strzepak Ł. Wpływ ćwiczeń leczniczych na wskaźniki jakości życia u pacjentów z bólem dolnego odcinka kręgosłupa. *Prz Med. Uniw Rzesz.* 2010;1:66–72.