KINESIO TAPING IN THE REHABILITATION OF ADOLESCENT IDIOPATHIC SCOLIOSIS - EFFECTS OF A TWO-MONTH TREATMENT PROGRAM

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ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS) is represented as pathological postural adaptation of the body through a structural THREE-DIMENSIONAL DEFORMITY of the vertebral column and the body in process of puberty. Although scoliosis was described in detail by Hippocrates, with this condition there are still many unknowns. Theories about the origin of AIS are different, but there is a consensus about the multi factor etiology. Basic characteristics of pathological pattern of AIS are: postural asymmetry, dysfunction in proprioceptive system and abnormal postural balance. The origin of the problem points to the CENTRAL NERVOUS SYSTEM.

KINESIO TAPING method provides a specific approach in a way that it reverses the pathological postural adaptation of the spine and the body that commonly occurs in AIS. According to the Schrot theory on the division to the functional segments (blocks) and its method of three-dimensional scoliosis treatment, the complete elongation of the spine is achieved by ACTIVE DE-ROTATION between three or four functional blocks. In the Schrot method, it can be carried out through rotary breathing, while KINESIO TAPING method gets the same from the outside, by placing the tape onto the skin.

OBJECTIVE: The objective of the case study is to show the effects of a two-month intensive treatment of AIS with emphasis on the KINESIO TAPING method which integrate effects of various therapeutic approaches and leads toward long term goal: FUNCTIONAL REEDUCATION of the patient, and not only POSTURAL CORRECTION.

METHODOLOGY: The 15-year-old patient with AIS visited physiotherapist in March 2012. The assessment of the postural status was done initially and after a two-month treatment.

The rehabilitation included four therapeutic methods applied by the same practitioner: manual therapy (6x MT), Kinesio Taping (6x KT), neuromuscular therapy (16x NT) and virtual reality exercises (26x VR). The therapeutic protocol was organized through the 8 weeks of rehabilitation: every Monday afternoon the treatment started with manual therapy (Maitland) and ended with Kinesio Taping application; every Wednesday afternoon the treatment included neuromuscular therapy (PNT) with tape support; every Thursday evening the patient had to remove the tape; and every Friday afternoon the treatment included neuromuscular therapy without support of the tape. Virtual reality (VR) exercises were added on Tuesday and Thursday (with tape application) and Sunday (without tape application) afterwards.

According to current knowledge, the asymmetry in paravertebral muscles as the origin of AIS is rejected and shown as a secondary aspect. KINESIO TAPING for muscle inhibition/facilitation should be advanced using another techniques. The effectiveness of this treatment using orthosis is an issue that is intensively discussed. Braces give some common non-operative approach, which has been used for 40 years, but more controlled trials of its effectiveness for AIS are necessary.

KINESIO TAPING application included a combination of two techniques – SPACE CORRECTION (tape in the first layer, placed longitudinally) and FASCIA CORRECTION (tape in the second layer, placed transversely) applied on two central blocks, guided by the conception that central functional segments are the key of the AIS posture. Kinesio was worn for 4 days to facilitate prolonged and intensive postural reeducation.

RESULTS: Results show a significant improvement from initial to final postural and functional status over a period of two months. KINESIO TAPING method successfully integrates effects of similar therapies and improves postural related problem solving.

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Kinesio Taping® in the rehabilitation of adolescent idiopathic scoliosis - effects of a two-month treatment program

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ABSTRACT

Kinesio Taping method provides a specific approach in a way that it reverses the pathological postural adaptation of the spine and the body that commonly occurs in adolescent idiopathic scoliosis (AIS).

According to the Schroth theory on the division to the functional segments (blocks) and its method of three-dimensional scoliosis treatment, the complete elongation of the spine is achieved by active de-rotation between three or four functional blocks. In the Schroth method, it can be carried out through rotary breathing, while Kinesio Taping method gets the same from the outside, by placing the tape onto the skin.

Objective

The objective of the case study is to show the effects of a two-month intensive treatment of AIS with emphasis on the Kinesio Taping method which integrate effects of various therapeutic approaches and leads toward long-term goal: functional reeducation of the patient, and not only postural correction.

Methodology

The 15-year-old patient with AIS visited a physiotherapist in March 2012. The assessment of the postural status was done initially and after a two-month treatment.

The rehabilitation included four therapeutic methods applied by the same practitioner: manual therapy (8x), Kinesio Taping (8x), neuromuscular therapy (16x) and virtual reality exercises (24x). The therapeutic protocol was consistent throughout the 8 weeks of rehabilitation: every Monday afternoon the treatment started with manual therapy and ended with Kinesio Taping application; every Wednesday afternoon the treatment included neuromuscular therapy with tape support; every Thursday evening the patient had to remove the tape; and every Friday afternoon the treatment included neuromuscular therapy without the support of the tape. Virtual reality (VR) exercises were added on Tuesday and Thursday (with tape application) and Sunday (without tape application) afternoons.

Kinesio Taping application included a combination of two techniques - space correction (tape in the first layer, placed longitudinally) and fascia correction (tape in the second layer, placed transversely) - applied on two central blocks, guided by the conception that central functional segments are the key of the AIS posture.

Kinesio was worn for 4 days to facilitate prolonged and intensive postural reeducation.

Results

Results show a significant improvement from initial to final postural and functional status over a period of two months.

Kinesio Taping method successfully integrates effects of similar therapies and improves postural related problem solving.

Keywords

Kinesio Taping, AIS, rehabilitation