Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The Effect of A Combination of Corrective Exercise and Kinesio taping stretching forces/directions on Postural Kyphosis in Adolescents

Protocol summary

Study aim

Determination of the effect of kinesiotype band on angular change in patients with postural kyphosis and comparison with control group Determination of the degree of kyphosis according to demographic variables

Design

This study was a single blind randomized control trial on 33 patients with postural kyphosis. The participants were divided into three groups, which included the control group with routine therapies and the two groups of parallel with the different approaches attaching the kynesiotape band.

Settings and conduct

Target population: participants with postural kyphosis who are referred to the research center of Tabriz Imam Reza Hospital from clinic.

Participants/Inclusion and exclusion criteria

Inclusion criteria in the study: patient Satisfaction to Participate in the Study, age between 15 and 20 years, natural neurological examination , angle 60> x> 40 degrees on sagittal plane. exclusion criteria: chest diseases, scoliosis, previous damage to the spine and pelvis and lower extremities, use of drugs that affect muscle function at least 3 months ago or during the study, presence of systemic or localized infection in the spine, tumor, disease Skin, asthma, epilepsy, uncompensated heart failure, disc disease, history of previous surgery, spinal anomalies.

Intervention groups

The control group: patients undergo routine and corrective exercises and intervention groups are treated with differential approach of kynesiotape that included the paper off method with elongation of 10-15%, with the goal of most of the role of supportive tape strip, reducing pain, muscle fatigue and light to moderate tension method with a tensile strength of 50-25%with the goal of the muscle stimulation to increase muscle strength and strength.

Main outcome variables

Measured angle;

General information

Reason for update

The age range in this study was changed from 13-18 year-old to 15-20 year-old when data was collected. Cause: In this study, to check and control the participants activities before and after entering the study, including variables affecting the postural kyphosis angle, such as sitting time and physical activity level, we used the International Physical Activity Questionnaire (IPAQ), however, this questionnaire was created and evaluated for the age range of 15-69 year-old, So we decided to change the starting age range from 13 to 15, and also, since the patients were referred by the clinic, due to the influenza and Covid-19 period at the time of data collection, and due to the shortage of referral participants . We had to increase the age range of participants from 18 to 20 at the study.In the title section, only the stretching forces/directions of the tape is entered. secondary variable: physical activity level, sitting time (sedentary behavior) We hope that due to the difficulties and conditions during data collection, you will apply the age change created in this study to IRCT. sincerely

Acronym

IRCT registration information

IRCT registration number: **IRCT20091104002664N4**
Registration date: **2019-07-07, 1398/04/16**
Registration timing: **prospective**

Last update: **2023-11-10, 1402/08/19**
Update count: **2**

Registration date

2019-07-07, 1398/04/16

Registrant information

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Yaghoub Salekzamani

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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2019-07-12, 1398/04/21
Expected recruitment end date
2020-04-17, 1399/01/29
Actual recruitment start date
2019-07-12, 1398/04/21
Actual recruitment end date
2020-04-17, 1399/01/29
Trial completion date
2020-04-17, 1399/01/29

Scientific title
The Effect of A Combination of Corrective Exercise and Kinesio taping stretching forces/directions on Postural Kyphosis in Adolescents

Public title
Kinesio taping in Postural Kyphosis
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Patient Satisfaction to Participate in the Study Age of entry between 15 and 20 years old Natural neurological examination Angle 40> x> 60 degrees on sagittal plane
Exclusion criteria:
Chest Diseases Scoliosis Previous injuries to the spine and pelvis and lower extremities Taking medications that affect muscle function at least 3 months or during the study Systemic or localized infection in the spine Tumors and malignancies Diseases of the skin such as psoriasis and eczema Asthma Epilepsy Uncompensated heart failure Diseases of the disc History of previous spinal anomalies such as spondylosis, spondylolystitis, Schuermann's disease, congenital spinal cord disease
Age
From **15 years** old to **20 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant

Sample size
Target sample size: **33**
Actual sample size reached: **54**
Randomization (investigator's opinion)
Randomized
Randomization description
Randomization method: Simple randomization Random unit: Individual randomization Randomization tool: Statistical software The sequence of randomization : Randomized interventions will be assigned to patients in the order of entering the study. Allocation concealment: Non-transparent letter packets with random sequences will be used, so that first a random sequence will be generated by statistical software, then a number of envelopes with an aluminum wrapper will be provided and each random sequence created on a card And the cards are inserted into the envelopes of the letter, in order to preserve the random sequence on the outer surface of the envelopes, the numbering is done in the same order. Finally, the envelope is enclosed and placed in a box respectively. At the time of registration, participants will receive one of the envelopes in the order of entry, and the group assigned to that participant will be identified.
Blinding (investigator's opinion)
Single blinded
Blinding description
Blind group are participants who will be unaware of the allocation of treatment using sealed letter packets.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Regional Ethics Committee of Tabriz University of Medical Science
Street address
Vice Chancellor for Research, Tabriz University of Medical Sciences, Golgasht Str.
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Province
East Azarbaijan
Postal code
5166614756
Approval date
2019-01-08, 1397/10/18
Ethics committee reference number
IR.TBZMED.REC.1397.780

Health conditions studied

1

Description of health condition studied
Postural Kyphosis

ICD-10 code
M40.04
ICD-10 code description
Postural kyphosis, thoracic region

Primary outcomes

1

Description
Measured angle
Timepoint
Patients are evaluated before and after the visit, and one month after the change in postural kyphosis angle and motion limitation.
Method of measurement
Clinical examination, flexible ruler, kyofometry and photogrammetric

Secondary outcomes

1

Description
physical activity level
Timepoint
before intervention and 6 weeks after intervention
Method of measurement
IPAQ (International Physical Activity Questionnaire)

2

Description
sitting time (sedentary behavior)
Timepoint
before intervention and 6 weeks after intervention
Method of measurement
IPAQ (International Physical Activity Questionnaire)

Intervention groups

1

Description
Intervention group: The second group and the third group are interventional group that are treated with kynesiotape bandage along with routine treatments. intervention groups are treated with differential approach of kinesiopy strip tape so that in the first group of intervention, the paper off method is used, in which in this method, an elongation of 10-15% is used, with the goal of most of the role of supportive tape strip, reducing pain and thoracic and reducing muscle fatigue.
Category
Treatment - Other

2

Description
Intervention group: . In the second group, the method uses a light to moderate tension method with a tensile strength of 50-25%, in which the aim is to stimulate the muscle to increase muscle strength and strength.The shape of the binding band is in the form of V, and the patient is asked to sit in a sitting position. The therapist measures the strip band from the T1-T12 vertebrae and slices 4 pieces with it, and then, the band is bonded with the desired elasticity in the shape of V. The method of attaching the strip band is also such that a piece of striped band is parallel to the spine and is spaced 5 cm in place of the erector spine muscle. The second piece is fastened to form a larger sensor to facilitate the extension of the trunk and after 1 month to follow up and review the effect of the treatment. Patients are evaluated before and after the visit, and one month after the change in postural kyphosis angle and motion constraints.
Category
Treatment - Other

3

Description
Control group: : The control group is where patients undergo routine and corrective exercises.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Emnam reza hospital
Full name of responsible person
Neda Dolatkhah
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Sponsors / Funding sources

1

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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Tabriz University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available