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SEMESTER: 6th

Answer (A):

Mulligan Concept of Natural Apophyseal Glides (NAGS):

(1): Condition of mechanical neck pain;

Neck pain is starting from posterior side of skull and lower cervical spine. In this painful condition vertebrae are disturbed. And the joints of cervical spine are damaged and no more.

CAUSES:

- Decrease in mobilization.
- Creating pain.
- Reduce the immobility.

Methodology:

A sample size of 50 (n=50) subjects are taken from physiotherapy department . National hospital lahore distributed by two groups of twenty five each.

Researcher take priority.

All participants before any inspection or examination.

Treatment:

Treatment remain same for both groups.

- Neck range of motion.
- Strengthening exercises.
- Short wave diathermy (SWD)

Group B received NAGS.

Treatment frequency:

Three times per week for two weeks(1).

SCALE;

Data collecting using numeric pain rating scale (NPRS) also change in pain intensity and data by constructed questionnaire.

Data were analysed using spss version 22.

Pain reduction:

NPRS pre and post treatment in pain reduction.

Conclusion:

Natural apophyseal glides (NAGS) are less effective than mulligan sustained natural apophyseal glides (SNAGS) in mechanical neck pain.

(B)SNAGS:

Mechanical neck pain:

Mechanical neck pain is from posteriorly and go to the lower cervical spine and shoulders. Vertebrae are also distributed cervical spine are no work to perform.

Result;

- Decrease in mobility.
- Pain create.

In this mulligan sustained natural apophyseal glides. (SNAGS) are apply in mechanical neck pain.

To reduce the mobility and pain.

Group B receive (NAGS)

Calculation: Value of pain on NPRS for both groups A and B.

Before treatment:

$3.72 \pm 0.61373$  and  $3.84 \pm 0.47258$ .

Conclusion:

Mulligan Sustained Natural Apophyseal Glides (SNADS) are more effective than Natural Apophyseal Glides (NADS).

(C) Mobilizing With Movement (MWM):

Exercise treatment:

In mechanical chronic neck pain of musculoskeletal dysfunction pain induced one or movements.

Conclusion:

Concept of mulligan mobilizing with movement (MWM).

Techniques are:

- Improvement of pain.
- Chronic mechanical neck pain.
- Disability of neck.
- Disability of movements of neck.

Summary:

Mobilization exercises treatment of SNAGS,NAGS are reducing pain,improve function of mechanical neck pain.

It will be the most common.

Neck pain are the most common pain musculoskeletal disorder in people.

This pain are available in those positions which are non - actively sitting.

Manual therapy exercises in a form of mobilization with movement is a main treatment procedure from chronic neck pain.

(2) LOWER BACK PAIN:

(A)NAGS:

Facet syndrome is a cause of low back pain.

Apophyseal glides:

- Therapeutic ultrasound
- Spinal stabilization exercises.

Design: Single blind.

Setting: Department of orthopedics.

Intervention:After baseline assessment participants (N=15) assigned to group A.

Measurement:

Participants of first baseline assessment pre intervention.

Result: ANOVA test showing that there is highly difference in pain.

( $f=18.53, p<0.0001$ ).

Conclusion: Improves the back muscle endurance in lumbar facet syndrome.

## (2)SNAGS:

Facet syndrome is a common cause of lower back pain.

- Hypertrophic changes.
- Osteoarthritis.

Three physiotherapy treatment on lumbar facet syndrome.

Mulligan sustained natural apophyseal glides.

- Therapeutic ultrasound.
- Spinal stabilization exercises in case of lumbar facet syndrome.

Design: Randomized control pilot study.

Setting: Department of musculoskeletal physiotherapy.

- PDVVPF.
- Ahmednagar.

Intervention:Mulligan sustained Natural Apophyseal Glides (SNAGs)

(Cont,1MHz,2,0-W/cm<sup>2</sup>,10min) and spinal stabilization exercises.

Group B which received Maitland spinal (PAGlides),Therapeutic ultrasound

(Cont,1MHz2,0W/m<sup>2</sup>,10min) And spinal stabilization exercises for the period of two weeks.

Measures: 2nd assessment of the end of 2nd week and 3rd week at the end.

For example:1 week after the active intervention.

Third week measures included for the study.

Result: Sovenson's test timing( $f=20.67$ . $p<0.00010$ ) on comparison of outcomes between two groups at the end third week.

Conclusion: SustainedNatural Apophyseal glide significantly decrease the pain.

## (3) Mobilization with movement (MWM):

Low back pain has the most common problem. Lumbar stabilization exercises and mulligan mobilization in LBP.

Methods: This controlling exercise was conducted at physiotherapy department of lahore hospital. Fourty- four patients are selected in two groups.

(1) Group A treat by the stabilization exercises.

( 2)Group B patients treat by the Mulligan mobilization.

Results: Participants in mulligan mobilization group show marked improvement as compare to group of stabilization exercise.

Conclusion:

Result of the study that Mulligan mobilization is more effective than stabilization exercises for the treatment of LBP. Mulligan mobilization are not only decrease pain but also improve function and flexibility of spine.

(C) Condition of cervical and upper thoracic spine:

(1)NAGS: stand for Natural Apophyseal glides.

NAGS are used for the cervical and upper thoracic spine.

They consist of oscillatory mobilization instead of sustained glide like SNAGS. It can be applied to the facet joints between 2nd cervical and 3rd thoracic vertebrae.

NAGS are mid-range to end range facet joint mobilization apply to antero superiorly along the treatment planes of the joint selected.

Use for restricted spinal movement.

Treatment of NaGS for the irritable conditions.

(2)SNAGS: Stand for sustained Natural Apophyseal Glides.

SNAGS: Can be applied to all the spinal joints.

The therapist apply the appropriate zygapophyseal glide. The patient performs the symptomatic movement.

Result: Full range of pain free movement.

Condition:

They are not the choice in condition they are highly irritable.

Position:

SNAGS are usually perform in;

- Weight bearing.
- Use in non-weight bearing positions.

(3) Peripheral MWM:

Movement has been identified.

Use to weight bearing or non weight bearing movement.

Depending on;

- Severity
- Irritability
- Nature of the condition.

Mobilization perform always into resistance but no pain.

Relief pain and improvement in ROM.

Spinal Mobilization:

Transverse pressure is apply the side of relavant spinous process of patient moves the limb through the previously restriction range of motion.

Assumption of restriction of motion of spinal cord is ofcourse.

Spinal movement must occur when a limb moves beyond a certain point.

- Technique addresses a spinal structural.
- Mechanical restriction.

But this may have neural implications.

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