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Q:1. Mullagin introduced the concept of Natural Apophyseal Glides (NAGs). Sustained Apophyseal Glides (SNAGs) and mobilization with movement (MWM) as a way of treating various musculoskeletal conditions. List three conditions where this concept can be used as a therapeutic intervention, elaborate each of them separately. Go through different research studies/articles from the web to support your answer. Summarize your answer in a minimum of 700 words for each of the three conditions you list.

ANSWER:-

INTRODUCTION:-

Headache is most common in the people all over the world. 90% of population have experienced this.

Its ratio is greater in women than men patients with chronic headache are about 2-3%.

these patients suffer from migraine at least Eight times in 2 weeks.

In grownup population, 2.5% of people experience headache.

Attack rate increases to 53% after whiplash injury.

Headache with neck pain is the under stage of a kind of headache related to damage to cervical musculo-skeletal structure. It generates problems like decreasing the efficiency of work, causing troubles in business, patients with neck pain cannot exercise properly because of the discomfort in the neck.

Elaboration of Therapeutic Interventions to cure cervicogenic Headache:

- => It needs to make use of positional exercise.
- => For neck patients clinical manual are joint mobilization and exercise.
- => Patients participate in the treatment by actively making moves while therapists continuously make glides in the joint.
- => Effective treatment for patients with cervical disabilities can be the exercise of the direct joint.
- => the study conducted was the purpose of investigating the effect of the sustained natural apophyseal glides

Participants => Total of 40 women between 30-60 years of age with neck pain are under treatment in spine hospital in Seoul agreed to participate in the study.

SANGs Group:-

It use the mulligen SANGs techniques as a mean of relieving pain from Head and Neck.

=> First, a manual therapist sat near to the patient.

The therapist held the patient with his trunk and wrapped the patient's head lightly with his arm on the patient's side and placed the ring finger on the trouble spot right above the small vertebral joint.

therapist placed his opposite hand on the lesion site.

On the site, the therapist performed gliding in the hand, Which was touching the spinous process, should be relaxed in order not to squeeze too hard.

The source of power of gliding on the joint surface must come from the opposite hand of the patient contacting hand.

The therapist kept on gliding the small joint, and made the patient turn his head to the side of limited mobilization, and pain.

When the patient was turning his head, the therapist fixed the head stably with his hand on the spinous process following the treatment spot in order to maintain the SNAGs technique, and remained in the position for at least 10sec.

This treatment was administered 10 times in a row, 20 min total. At the last stage of actively rotating the neck, the patient used his own hand to make a passive rotation.

After holding in the position of newly obtained painless range of motion for 2 sec, the glide should be maintained until the neck slowly returns to the original position. The Mulligan SNAGs techniques were applied to participants in the SNAGs group, with three 20-min sessions per week, for a period of Four weeks.

Placebo SNAGs Group:-

=> A manual therapist who used the placebo effect.

=> The therapist did not apply any other techniques, but the contracting pressure of the hand. Which was touching the dysfunctional joint.

The therapist did remain in the position for at least 20-sec. This was administered 10 times repeatedly. 20 min per performance. This was administered Three times per week. 20 min per performance, a total of 12 times in 4 weeks.

Outcomes measures:

UAS was used for assessment of patient's shoulder joint pain.

The reliability ($r=0.99$) of this assessment is confirmed in the study reported by Bijus Etal (2001).

A mark showing the duration time of their pain.

'0' indicated the absent duration 24 indicated the pain.

Score written measured from 0 to 5 points.

Statistical Analysis:

=> SPSS 19.0 programme was used for statistical analysis.

the Shapiro-wilk test was used to determine the distribution of the general properties and outcome measures of the subjects.

SUMMARY => it has a effect on life and performance and can lead to cervical dys-function.

From various articles our study shows a result of application of the Mulligen SNAGs technique to middle-aged women with neck pain duration time of headache and migraine were reduced and cervical fuction was considered to be improved.

Following applications of SNAGs to 37 patients with cervicogen headache for 6 weeks UAS of the experimental group was decreased ($P < 0.001$).

6 weeks of intervention, significant difference was observed betwwen he two groups proving SNAGs to be effective for patients with cervicogenic headache.

The cause of cervicogenic headache is reported to be hypofuction of the ceervical vertebrae.

As a result of the application of Mulligan SNAGs teachnique to middle-aged women with neck pain, duration time of headache and migraine were reduced, and cervical function was considered to be improved.

INTRODUCTION:-

Conditions where moment with mobilization (MWM) can be used as therapeutics.

To understand neuro muscular control it is necessary to understand transfer activities of humans in mechanically.

Specially knee joint provide a main role in walking and other transfer activities.

Degenerative Osteoarthritis cause many problems in physical activities and lives

old aged people.

Because of the increase in old aged people population degenerative osteoarthritis has become a common disease which is a severe musculoskeletal disease and become widespread disease in old aged people.

Degenerative Osteoarthritis can cause pain in joints, improper function of joint, stiffening, pressure pain, joint hypertrophy and muscle weakening.

Which can decrease mobility and functional activities of knee joint.

To treat degenerative osteoarthritis drug based and non-drug based treatments are available.

Drug treatment can decrease pain but also have some consequences.

Electrotherapy, Hyperthermia, Phototherapy, Exercise therapy and manual therapy are non-drug treatments.

These treatments are more effective because it cause decrease patients reliance on drugs, improves muscular endurance co-ordination and muscular strength.

NAG (Natural Apophyseal Glide), SNAG (Sustained Natural Apophyseal Glide), Or MWM (Mobilization With Movement) techniques are used by Mulligan techniques which are a type of manual therapy for spinal upper and lower extremity pain.

Mulligan technique have no side effects and decrease patients pain.

For a therapist these techniques are not physically intense to perform. They are also easy to learn and if applied properly, they have some effect on pain reduction.

We will try to identify when walking how the application of the MWM Mulligan technique affects pain and physical function of patient with degenerative osteoarthritis.

Methods and Patients to be Examined:

Before and after the treatment 30 patients were measured.

For 10 mints the group was treated with hot packs.

For 20 mints interferential current therapy,

and Ultrasound therapy for 5 mins.

When this treatment is completed, the experimental group then received MWM through Mulligan techniques.

With general physical therapy another control group was treated, and then performed truck stabilization exercises.

Both groups received their treatment three times a week over a six-week period. Until the end of the treatment the patients didnot limit their dialy movement and were instructed not to receive any treatments othar then MWM during experiment period.

The MWM technique combines active physiological exercises created by the motion of patients.

In this thechnique, small vibrations, conpressions and streching are applied to the end points affected body region without causing pain. Moreover these techniques are in a direction that produces no pain.

Now the technique is used all over the world.

in this study, the therapist first placed each patients leg on the affected side on a 30 cm high table.

After positioning himself or herself behind the patient, with both the therapist held the patient's lower leg. and rotated the Tibia upon the thigh while the patient flexed his or her knee.

For about 10 times to perform the motion of knee flexion the patient was instructed.

The degree of pain was scored between 0mm and 100mm (VAS).

VAS scored close to 0mm denotes a lower level of pain.

SUMMARY:-

This study was performed through experimental group in which physical therapy, trunk stabilization exercise and MWM using Mulligan technique were applied.

General therapy and truck stabilization exercise was also received by 2 control group.

Each group contains 15 patients.

Three treatment sessions were conducted weekly, over a six-week period.

On the knee joint during this manual therapy, changes in the patient's pain, stiffening and physical fuction were calculated.

Osteoarthritis is the most common type of osteoarthritis which is the cause of many cinsequences in elderly people. Women hahce higher chances of this than men.

Moreover if the disease is not treated properly then decrease human life span.

The clinical mechanism has not been completely established for the degree of pain and functional diseases caused by degenerative osteoarthritis. This disease is a chronic disease which cause severe pain and prolongs for a long period of time and therefore the treatment is focused on decreasing pain.

In the study, MWM using Mulligan techniques is similar to the motion of long and a single limb squat.

A study by Fisher 20 states that, After the improvements of muscular functions through exercises for degenerative osteoarthritis patients 16 weeks, the patients show 40% reduction in pain, 10% in reliance and 30% in dysfunction.

Now in the present study, with reference to Mulligan technique MWM was verified as effective at amelirating pain and physical improper function caused by

degenerative osteoarthritis. Therefore, MWM can be suggested more effective treatment for pain reduction and physical functions in degenerative osteoarthritis patients.
