6th World Congress on

PHYSIOTHERAPY AND REHABILITATION

November 12-13, 2018 Dubai, UAE

Workshop (Day 1)

Preeti Madaan, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Preeti Madaan

Rehabilitation Society of Physical Therapists, India

Vestibular rehabilitation therapy: Role of physical therapy in management of vertigo

Vestibular Rehabilitation Therapy (VRT) is the therapy used for rehabilitation of patients with vestibular lesion who have not compensated fully. Basically Vestibular Rehabilitation Therapy is customized exercise program designed according to the need of patient by physiotherapist.

Three clear indications for vestibular rehabilitation

1. Specific interventions for benign paroxysmal positional vertigo (BPPV)
2. General interventions for vestibular loss.
   - Unilateral vestibular loss e.g in case of vestibular neuritis or acoustic neuroma
   - Bilateral vestibular loss e.g in case of gentamycin toxicity and related conditions
   - Central vestibular lesions - brainstem infarct, cerebellar infarct, MS etc..
3. Empirical treatment for common situations where the diagnosis is unclear.
   - Post-traumatic vertigo
   - Multifactorial disequilibrium of the elderly.

Persons without a vestibular problem e.g. The patients who will not benefit from vestibular rehabilitation therapy are - as a sentence...

- low blood pressure
- medication reactions (other than ototoxicity)
- anxiety, malingerers, depression (although T'ai Chi may be helpful for anxiety)
- migraine associated vertigo (although it has been reported to be helpful nonetheless)
- transient ischemic attacks (TIA)

Persons with fluctuating vestibular problems.

- Meniere's disease
- perilymph fistula

Functional Goals of VRT-

- Decrease disequilibrium – Improve functional static & dynamic balance.
- Improve postural and gait stability.
- To reduce motion related dizziness.
- Decrease oscillopsia-visual blurring during head movement – increase gaze stability i.e. DVA during both static and dynamic activities

Biography

Preeti Madaan (PT) has completed her MPT at the age of 25 years from Lovely professional University. She has been working with her colleague which is an ENT surgeon for management of vertigo and dizziness patients. They as a team of ENT and PHYSIO , first of its kind in INDIA, have taken more than 50 workshops for PHYSIOS, ENTs and Genral Practitioners. They have unique method of teaching with their own models and videos of their own patients.

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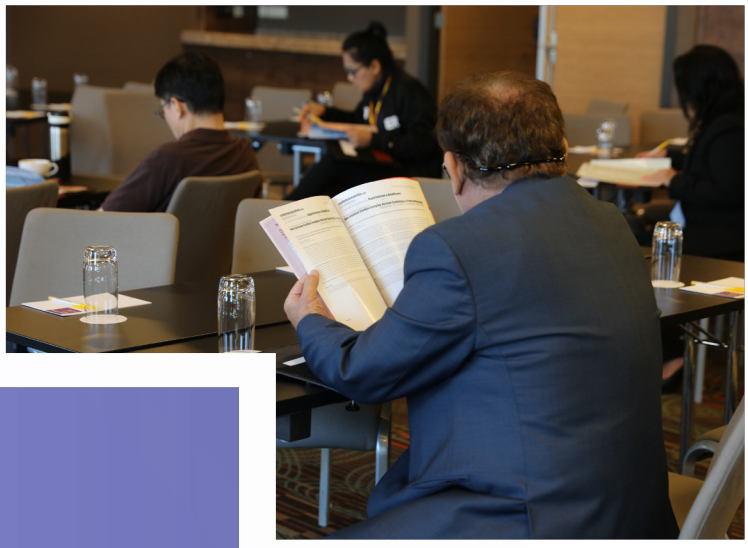

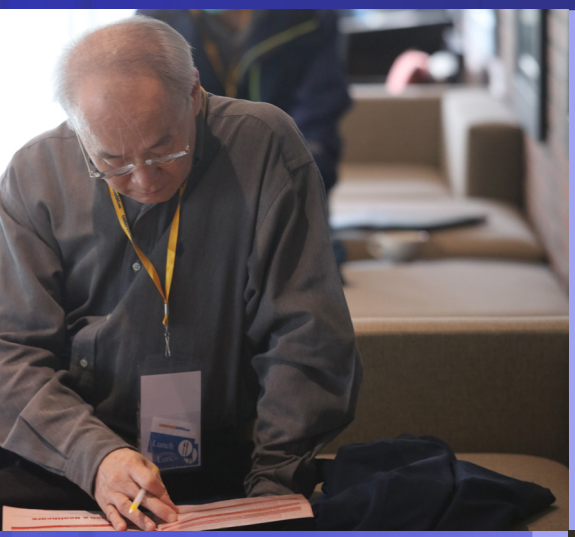

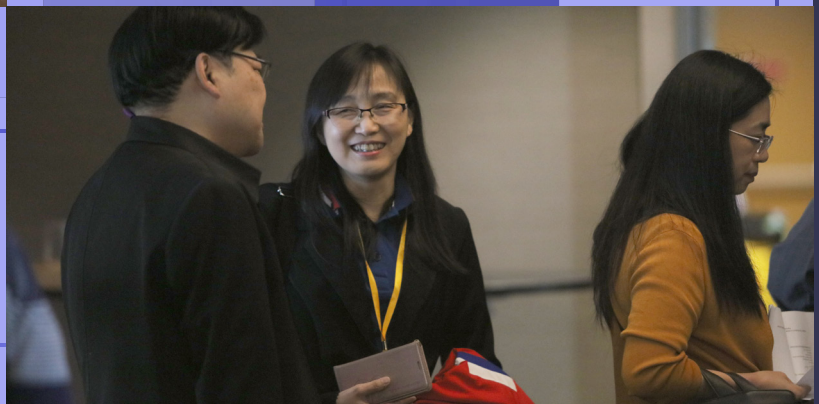

Scientific Tracks & Abstracts (Day 1)

Kritika Satija, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

The benefits of early post cardiac surgery recovery program for Tahitian patients

Kritika Satija
Auckland District Health Board, New Zealand

Aim: To explore the benefits of early post-operative Cardiac Rehabilitation (CR) for Tahitian patients.

Method: Audit of 50 Tahitian patients from Feb 2017-2018 who received early post-operative CR program at ADHB. 62% of the Tahitian patients had their nurse specialist and physiotherapist assessment within 1-3 days post hospital discharge and 50% of the patients were assessed in ≤10 days post cardiac surgery. This was non-Tahitian cardiac patients are seen two weeks post discharge and have to wait for at least 6-8 weeks for physiotherapy assessment.

Results: Complications noted during the physiotherapy/nursing assessments included: musculoskeletal complications (12%), wound complications (8%), cardiac and respiratory (10%), suboptimal diabetic control (2%) and multiple issues (>2 issues or true complications) (24%). 62% of the patients still completed the exercise program; however the remaining 38% had multiple reasons for non-completion: Early return to Tahiti (8%), multiple medical complications (12%), cardiac and respiratory complications (6%), musculoskeletal complications (6%), wound infection (4%) and suboptimal diabetic control (2%). No complications were seen in 42%.

Conclusion: Assessment and rehabilitation within one to two weeks after discharge from cardiac surgery is beneficial for patients as it allows the multidisciplinary team to diagnose and address complications. However, this is a special cohort and there is no other cardiac rehabilitation program in NZ with which to compare our data.

Biography

Kritika is a senior cardio-respiratory physiotherapist at ADHB in NZ. She has a keen interest in cardiac has presented two posters at the annual Cardiac society of Australia and NZ conference, where she won the best poster prize for allied health in 2018. Academically, Kritika completed her Bachelors of Health Sciences (Physiotherapy) in 2012 and Post Graduate Diploma in Rehabilitation from AUT University in 2017. She is completing her Masters thesis at present with the aim of progressing towards a doctorate in the near future. In her spare time, she enjoys running, baking and spending time with friends and family.

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Notes:

Tushar J Palekar, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Effect of pinch grip strengthening exercises and hand function among tea plantation workers

Tushar J Palekar
D.Y. Patil College of Physiotherapy, India

Aim: To assess the Pinch Grip Strength using Hydraulic Pinch Gauge and to find out the effects of pinch grip strengthening exercises in improving pinch grip strength on tea plantation workers.

Methodology: 60 samples within the age group of 25-50 years, both female and male who were working in the tea garden for more than 5 years were included in the study before taking a written consent from them. Participants who underwent any recent surgery or had injury/trauma to the upper limb (within 1 year), any neurological problem or hearing defect were excluded. Selection of the participants was done randomly. Pinch grip strength and two questionnaires, Hand Assessment Tool (HAT) and Patient Rated Wrist Evaluation (PRWE) were filled. Pinch grip strength was measured by baseline mechanical pinch gauge by taking three readings of each right and left hand. The quantity of tea leaves plucked was also assessed using standard weighing scale. These were a part of pre-experimental readings. Strengthening protocol was given for 4 weeks and 5 days a week i.e. for 20 sessions in a batch of 6x10 participants. 3 sets of exercises with 10 repetitions were performed and rest period of 1 min was provided between each set. After 4 weeks, post experimental readings were taken.

Result: Paired t-test was used to analyze the data of the pinch grip strength of both right and the left hand and for analyzing data of the amount of tea leaves plucked. The p value of all the three was found to be $p<0.0001$, which makes it statistically significant. For HAT and PRWE, Wilcoxon test was used. The p value came out to be $p<0.0001$. There was a reduction in the post value test indicating improvement in hand function.

Conclusion: Thus, the result shows that strengthening helps in improvement of pinch grip strength and hand function.

Biography

Tushar J Palekar is the Principal and Professor at Dr. D.Y. Patil College of Physiotherapy, Pune, India. He has nearly 20 years of professional experience in clinical as well as academics. He is a Doctorate of Philosophy (PhD) in Physiotherapy from Dr. D.Y. Patil Vidyapeeth, Pune. He received Significant Contribution Award from the Indian Association of Physiotherapists at Pune, India in 2011. He has co-authored a book and also has a patent to his credit. He has published and presented research papers in various national and international conferences.

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Notes:

Saud F Alsubaie, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Quantifying the intensity of balance exercises

Saud F Alsubaie
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Background & Aim: Balance training has been found to be useful for all age groups in improving mobility and functionality. Customized balance exercises and vestibular rehabilitation therapy have elicited beneficial results in improving balance in older adults and people with vestibular disorders, lessening the symptoms of vestibular disorders and reducing falls. However, the evidence for determining the appropriate intensity and progression of balance exercises is very limited. One of the methods used to measure exercise intensity was quantitative posturography that measures body sway. Usually the reliability of balance exercises performance is assessed in small set of exercises. In order to develop the field of measuring the intensity of balance exercises, the reliability testing must be performed using a large number of exercises. The purpose of this study was to investigate the test-retest reliability of postural sway produced during performance of 24 different balance exercises.

Methods: 62 healthy subjects between the ages of 18 and 85 years of age (50% females, mean age 55±20 years) participated. Subjects were tested during two visits one week apart and performed two sets of the 24 randomized standing exercises per visit. The exercises consisted of combinations of the following factors: Surface (firm and foam), vision (eyes open and eyes closed), stance (feet apart and semi-tandem) and head movement (no movement, yaw, and pitch). Postural sway was recorded via an inertial measurement unit for each exercise.

Results: Angular velocity sway measures in the pitch and roll directions demonstrated moderate and higher test-retest reliability scores (0.67-0.93).

Conclusion: Postural sway measures can be used as a reliable measure in determining intensity of balance exercises and guiding exercise progression.

Biography

Saud Alsubaie currently works at the Department of Physical Therapy and Health Rehabilitation, Prince Sattam bin Abdulaziz University. Saud does research in Rehabilitation Medicine, Neurology and Allied Health Science. Their most recent publication is Evaluating pulmonary function, aerobic capacity, and pediatric quality of life following a 10-week aerobic exercise training in school-aged asthmatics: a randomized controlled trial.

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Notes:

Manisha Rathi, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Effect of whole body vibration on functional performance of lower extremity in elderly

Manisha Rathi
Dr. D.Y. Patil college of Physiotherapy, India

Background: Aging leads to many health-related disorders which hampers the functional performance of the elderly individuals like mobility, balance, gait speed and strength. If proper exercises are done then we can regain the functional performance of the elderly, hence this study investigated the effects of vibration on functional performance in the elderly.

Aim: To compare the effects squat training on whole body vibrator and squat training on plain surface on functional performance of lower extremity in the elderly using short physical performance battery and timed up and go test.

Methods: In this experimental study, 30 healthy elderly participants with age group between 60 to 70 years and of both the genders were taken according to geriatric falls efficacy scoring of 16 to 19. Study was conducted at Dr. D. Y. Patil College of Physiotherapy, Pune, Maharashtra, India, after the approval from institutional ethical committee. Participants having any neurological, musculoskeletal or other chronic disease affecting ADL and IADL, any recent upper limb or lower limb fracture which hampers squat training with or without support, any acute inflammatory conditions like bursitis, synovitis, tendinitis, rheumatoid arthritis conditions involving balance deficits having any lower limb prosthesis fitted like a transfemoral or transtibial prosthesis were excluded. Written informed consent was taken from all the participants. The participants were first evaluated where chief complaints, history of present illness, and drug history was noted. Then the geriatric falls efficacy score was documented. These participants were then allocated to either group A or group B of 15 each through simple random sampling using computer generated allotment. Group A were given squat training on a vibratory surface using whole body vibration and group B was given squat training on a plain surface for 4 weeks, 3 sessions/week for both the group. Pre and post values of short physical performance battery and timed up and go test were documented and data analysis was done.

Result: The group A showed statistically significant improvement in repeated chair stand (M D=3.6), balance (MD=3.4), gait speed (MD=1.867) which are the components of short physical performance battery and TUG Score (MD=12.53) with p value ≤0.005 as compared to the group B, repeated chair stand (MD=2.533), balance (MD=2.667), gait speed (MD=0.133) and TUG score (MD=13.93).

Conclusion: The significant effects of whole body vibration with squat training on physical function in the elderly individuals using timed short physical performance battery and up and go test.

Biography

Manisha Rathi with her doctoral qualification is expert in evaluation and management of geriatric people and immensely involved in improving the independency and quality of life of the elderly. Her skill in the assessment of geriatrics individuals and treating them to fulfill their functional demand is unique. Squat training to older people on Whole body vibrator is a challenging task but she worked dedicatedly to bring excellent results in enhancing the lower extremity functions and in turn perk up functional independence. Whole body vibration helps in recruiting lower body muscles and thus increases strength and endurance. Her research work mainly focuses on balance, fall efficacy, Gait parameters and functional performance in Elderly. She is also working on assessing reaction time in elderly with a uniquely designed machine by her. Her focused approach and patience towards elderly is remarkable and should be taken in cognizance.

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Notes:

Sandeep Sharma, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Examination protocol in a dizzy patient

Sandeep Sharma
Rehabilitation Society of Physical Therapists, India

A practical easy to do examination protocol while approaching a patient of vertigo to clarify – Type of Dizziness. Dizziness is a term to describe a number of different sensations, especially uncertainty of a position or motion. Dizziness is derived from "Dysig" meaning stupid. Dizziness is categorized into 5 types: Vertigo, disequilibrium, lightheadedness, floating (psychogenic) and motion sickness and is illusion of motion or spinning sensation. Vertigo is of two types: Subjective in which person feels the motion and Objective in which surroundings revolve and patient sees the motion. Imbalance is wobbling on your feet-loss of balance without abnormal sensation. Patient usually complains of feeling of unsteadiness/imbalance when standing/walking/ turning –increased by uneven ground or turning. Fainting (Blackouts/ Presyncope) Usually due to cardiovascular e.g Postural Hypotension , Metabolic e.g. Hypoglycemia .Light headedness – Vague symptoms due to psychological cause, multisensory deficit etc. Motion Sickness – This is a mismatch between the visual and vestibular system. Commonly occurs with cars, boats and aero planes etc. When a patient approaches to vertigo clinic, for assessment First and foremost is to understand what patient means by dizziness-whether it is true vertigo or dizziness, type of Vertigo-- Central or Peripheral, then start ruling out the causes of dizziness and vertigo with special emphasis on examination of Vestibulo-occular and Vestibulospinal reflexes – their relevance and their usefulness.

Biography

Sandeep Sharma has completed his MS in ENT from Baba Farid University of Health Sciences in India. He is the President of Institute of Vestibular Rehabilitation.

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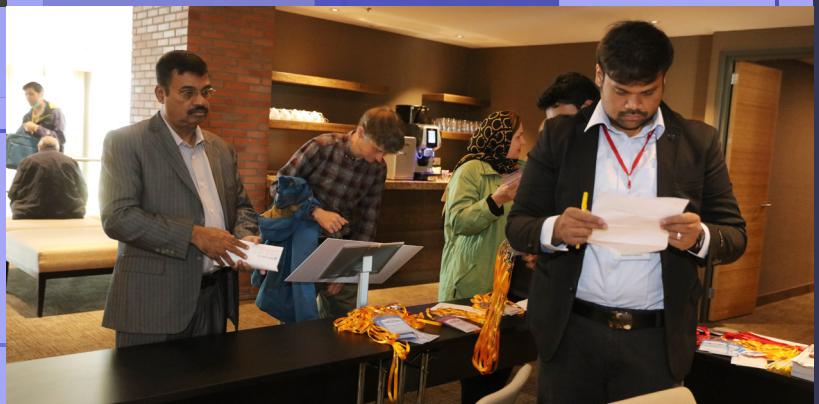

Workshop (Day 2)

Silverio De Rocca, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Silverio De Rocca

MPR International School, Switzerland

Mio functional and postural rehabilitation – B E D (Body Equilibrium Device) technology

The Body Equilibrium System (B.E.D.) : The first and only appliance designed exclusively for rehabilitation therapists (physiotherapists, osteopaths, chiropractors, etc. ..) for postural rehabilitation, capable of overriding the stomatognatic system. It is the first device on the market able to counteract the negative effects of the stomatognatic system during rehabilitation.

Objectives/Learning Outcomes:

Participants should be able to:

- Perform a detailed bedside clinical postural and posturometric diagnosis.
- Find the relation between stomatognatic system and tonic postural system.
- How to avoid the negative effect in posture.
- Reation between diet, alimentation and intolerances related to postural diseases.
- Recognize the etiology of the postural alteration (main receivers of posture)
- Use of the B.E.D Body Equilibrium Device practically the only device for posture.

Intended audience includes:

- Physiotherapists
- Primary Physicians
- Physiotherapy intern/student
- All rehabilitation therapist

Biography

Silverio Di Rocca has completed Bachelor's degree in Dentistry, Postgraduate degree in Functional Orthopedics both from the University of Buenos Aires, Argentina. He has also done a degree in Dentistry and Prosthetic at the University of Turin, Italy and a Doctorate in Dentistry and Prosthetic at University of Turin, Italy.

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Scientific Tracks & Abstracts (Day 2)

Manoj Kumar P V Nair, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Regenerative injections in osteoarthritis knee: Evidences

Manoj Kumar P V Nair
Dubai Physiotherapy and Rehabilitation Centre, UAE

Osteoarthritis is one of the most prevalent joint diseases and the leading cause of pain and disability around the world. Globally it ranks among the top 50 common sequelae of disease and injuries, affecting about 250 million people and estimated to affect around 4% of global population. Among the total global disease burden for OA, knee OA accounts for about 83%. Prevalence among females found to outnumber males in most of the studies. The prevalence of OA knee among American population found to be doubled since the mid-20th century. As the burden of this disease increases, the demand for Total Knee Replacement (TKR) surgeries goes up. According to estimates in US alone, there would be around 673% increase in TKR by 2030, needing about 3.48 million procedures done annually. There are various non-operative treatments available as conservative measures in OA Knee and a lot of controversies exist in the efficacy of these. Hence the paper discusses various regenerative injections viz., PRP, stem cells, dextrose prolotherapy used in OA knee and available evidences in literature.

Biography

Manoj Kumar P V Nair is an Indian Board Certified Physiatrist working in Dubai for the last 13 years. His main areas of interests are musculoskeletal medicine, interventional physiatry, pain management in musculoskeletal conditions, US guided injection techniques and sports injury rehabilitation. He is the author of books and journal articles and speaker in various platforms. He is passionate about lifestyle modifications in disease management and a regular participant in running events.

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Radhika Thakkar, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Pulsed electromagnetic field: A review in musculoskeletal conditions

Radhika Thakkar
SBB College of Physiotherapy, India

Statement of the Problem: Musculoskeletal problems like knee osteoarthritis, Low Back Pain (LBP) and non-healing bone Fractures are common conditions leading to pain, reduction in function and person's quality of life. Thus, this review was conducted to determine the effect of treatment with Pulsed Electromagnetic Field (PEMF) in musculoskeletal conditions like LBP, knee osteoarthritis and non-healing fractures on pain, functionality and quality of life.

Methodology & Theoretical Orientation: Databases were searched for systemic reviews and meta-analysis using PEMF therapy in musculoskeletal conditions. Keywords used were PEMF, musculoskeletal conditions, osteoarthritis, LBP. Three articles were found regarding knee osteoarthritis, LBP and non-healing long bone fractures.

Findings: One systemic review found that people with osteoarthritis who received PEMF therapy experienced pain relief of 15 points more compared to fake treatment, rating their pain to be 26 points lower on a scale of 0-100. Second systemic review was found about individuals suffering from LBP. Six studies were eligible in qualitative analysis and five in quantitative, scoring an overall 6.8 points according to PEDro Scale. The effect sizes indicated a remarkable reduction in pain intensity, favoring the PEMF groups. Third systemic review was found about the delayed union and non-union of long bone fractures, suggesting that PEMF stimulation may offer some benefit in its healing process.

Conclusion & Significance: As per the evidence, PEMF therapy may provide moderate benefits for osteoarthritis sufferers by relieving pain, which in addition to it, improves functionality in individuals with LBP. More definitive conclusions on treatment effect of non-healing fractures await further studies, since it is inconclusive and insufficient to inform current practice. Further research is needed to confirm PEMF therapy benefits in terms of physical function and quality of life in osteoarthritis sufferers and individuals with LBP, with standardized protocols and larger samples to achieve stronger conclusions.

Biography

Radhika Thakkar is pursuing under-graduate degree in Physical Therapy from SBB College of Physiotherapy, India. She has a keen interest in musculoskeletal rehabilitation and sports along with research. She has won awards for speech, recitation, poster-making and debate competitions and has actively participated in physiotherapy awareness programs conducted by the college.

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Notes:

Himanshu Mathur, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Forward head posture: New horizons require attention

Himanshu Mathur
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Happiness is the virtue of health and for a healthy living, age is not a parameter that matters. Translation of head forward on a stationary neck leads to a very common lifestyle disorder that is forward head posture. As we are flourishing into a technologically sound era we have burdened ourselves with a lot of lifestyle based health hazards. Due to the increasing speed of development, physical activity has reduced to a greater extent thus making our lives sedentary even at our workplace. Forward head position is characterized by an extension of the head together with the upper cervical spine (C1 to C2) accompanied by a flexion of the lower cervical spine (C4 to C7). This posture is associated with weakness in deep cervical short flexor muscles (capital flexors) and mid thoracic scapular retractor (i.e., rhomboids, middle and lower fibers of trapezius) and shortening of the opposing cervical extensor and pectoralis muscles. When the head is positioned forward the upper trapezius muscles activity is significantly higher than it is when in the normal alignment, the more the patient is to have pain from overusing the muscles. Forward head posture mostly occurs by the weakness of the anterior cervical neck flexor muscles which result in tightness of the sternocleidomastoid. Eventually these muscle imbalances have further disastrous repercussions on various functions. And this lecture is an initiative to drag everybody's attention towards sparsely addressed yet hazardous repercussions of forward head posture.

Biography

Himanshu Mathur has completed his Masters in Physiotherapy with specialization in Musculoskeletal branch from Jamia Hamdard University, New Delhi. He is working as an Assistant Professor in College of Physiotherapy, Jaipur National University, India. He has about 10 publications (including scientific and informative) in total. He has undertaken 3 comprehensive hand-on workshops, about 6 conference lectures and 5 scientific paper presentations at national and international level.

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Notes:

Snehalata Tiwari, J Nov Physiother 2018, Volume 8
DOI: 10.4172/2165-7025-C3-029

Effectiveness of the modified constraint induced movement therapy versus mirror therapy in improving hand dexterity in patients with sub-acute stroke: A comparative study

Snehalata Tiwari
Kaloji Narayana Rao University of Health Sciences, India

The aim is to compare the effectiveness of Modified Constraint Induced Movement Therapy (MCIMT) and Mirror Therapy (MT) in improving hand dexterity to patients with sub-acute stroke. 20 patients with sub-acute stroke were enrolled and divided into two groups: MCIMT and MT. Training for MCIMT was for 2 hours per day, 5 days per week for 5 weeks and training for mirror therapy was 2 hours per day, 5 days per week for 5 weeks with the help of assessment scales Fugl-Meyer Scale and Nine Hole Peg Scale, MCIMT and MT are proven efficient approaches with good functional outcomes in improving hand dexterity with the score of Fugl-Meyer and Nine Peg Hole Scale. The MCIMT combined with MT showed more improvement compared to MCIMT only group in the improvement of functions of hand dexterity for the patients with sub-acute stroke.

Biography

Snehlata Tiwari is currently pursuing Masters in Neurology. Her research effectiveness of the modified constraint induced movement therapy versus mirror therapy in improving hand dexterity in patients with sub-acute stroke mainly focuses on improving the fine movements of the patients which are used in ADL's and other motor functions with increase in motivational and functional activities of the patients.

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