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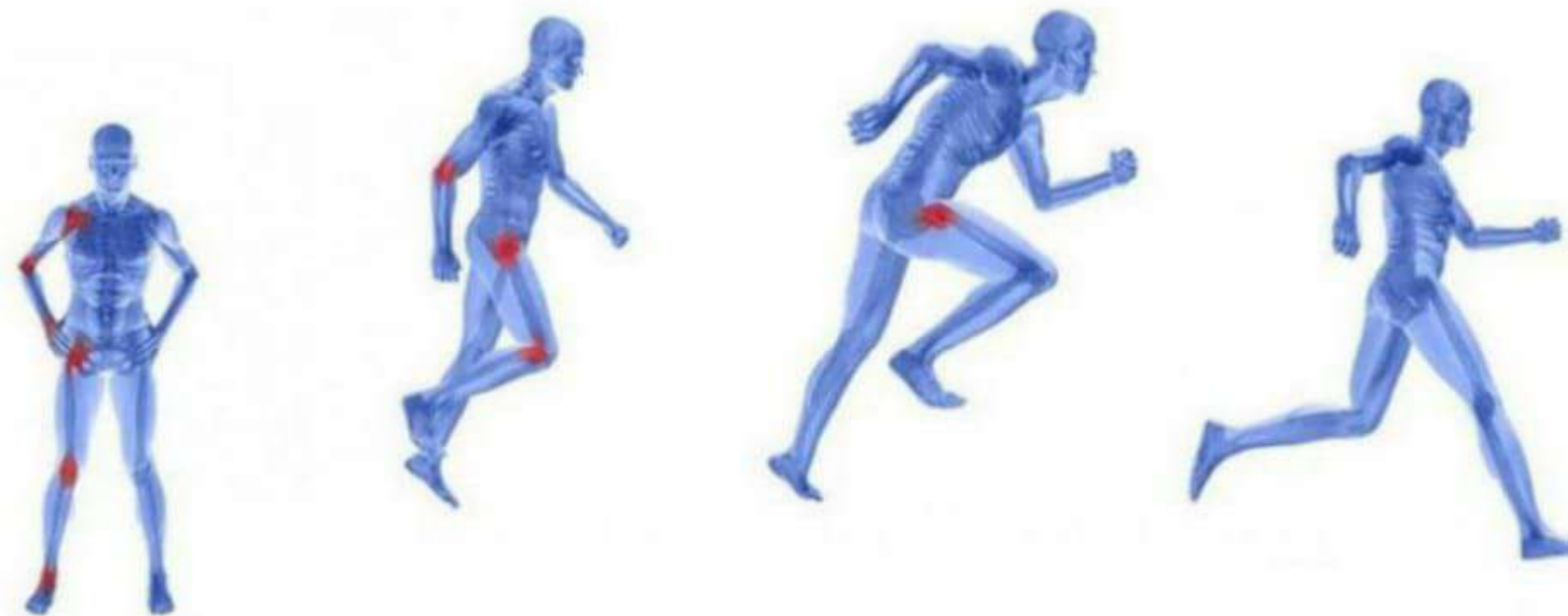
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Periyar E.V.R. High Road, Madhavayal, Chennai-95, Tamilnadu, India.



FACULTY OF PHYSIOTHERAPY



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PHYSIOTHERAPY TREATMENT FOR STROKE

FAIROZA.M
BPT 3rd yr 'D'sec

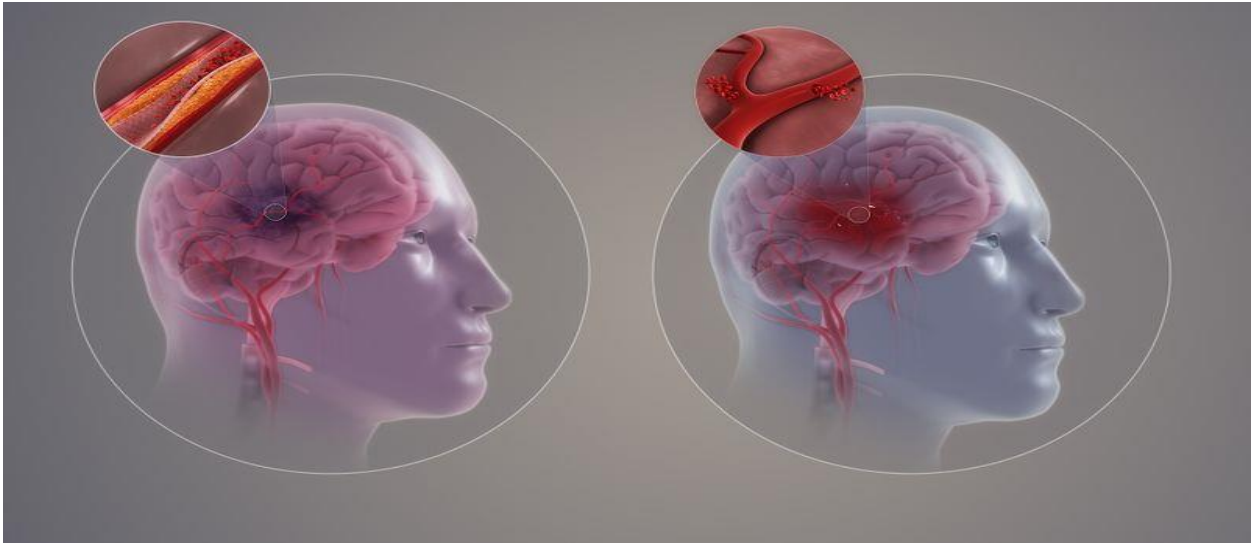


Introduction

According to the World Health Organisation, a Stroke is defined as an accident to the brain with "rapidly developing clinical signs of focal or global disturbance to cerebral function, with symptoms lasting 24 hours or longer, or leading to death, with no apparent cause other than of vascular origin and includes cerebral infarction, intracerebral hemorrhage, and subarachnoid hemorrhage".

Stroke Interventions has almost quadrupled in the past 10 years, with strong evidence seen in 30 out of 53 interventions for beneficial effects on one or more outcomes.

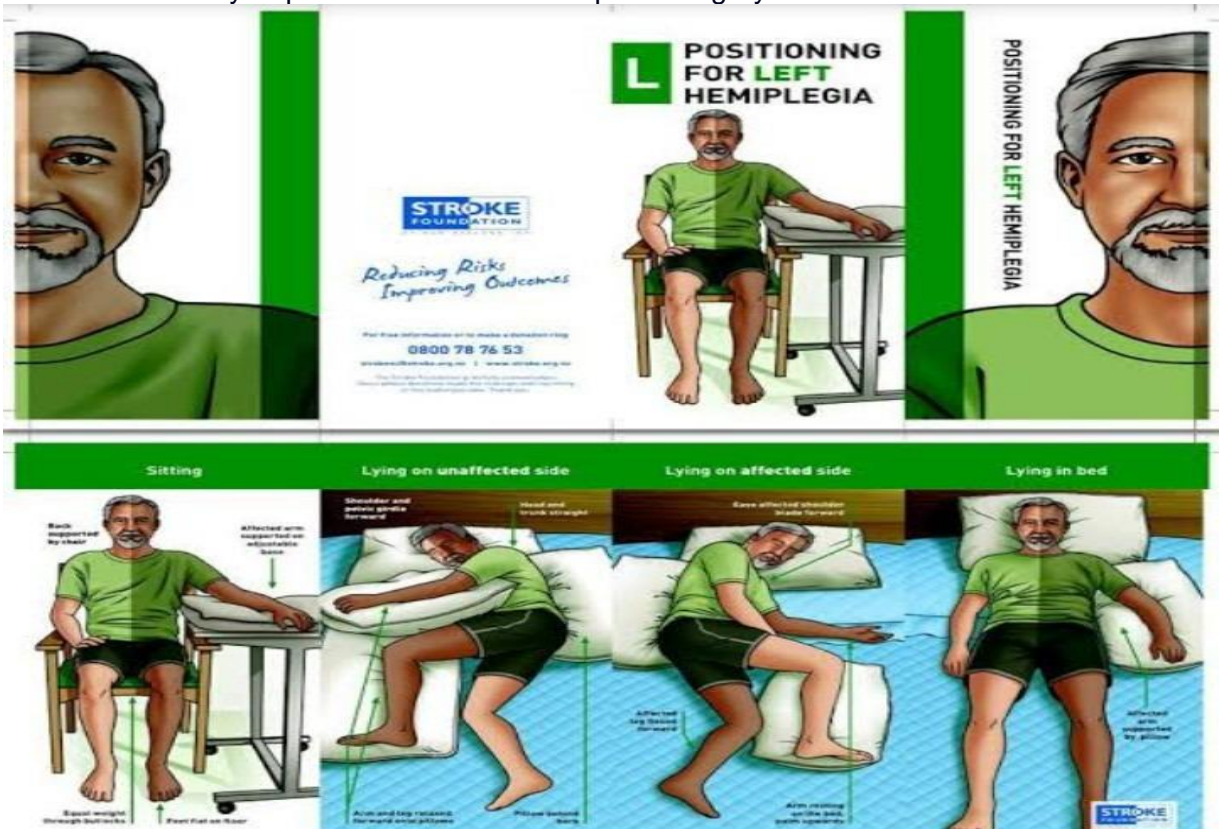
They suggest the main change lies in the increased number of interventions to which 'strong evidence' could be assigned and an increase in the number of outcomes for which the findings are statistically significant



Interventions: **Positioning**

Ability to change position and posture is affected in many individuals post stroke as a result of varying degrees of physical impairments.

Therapeutic positioning aims to reduce skin damage, limb swelling, shoulder pain or subluxation, and discomfort, and maximise function and maintain soft tissue length. It is also suggested that positioning may assist in reduction of respiratory complications such as those caused by aspiration and avoid compromising hydration and nutrition.



Early Mobilisation

Immobility is associated with a number of post stroke complications such as deep vein thrombosis etc.

Early mobilization aims to reduce the time that elapses between stroke and the first time the patient leaves the bed, increasing the amount of physical activity that the patient engages in outside of bed.

Early mobilisation (e.g. activities such as sitting out of bed, transfers, standing and walking) aims to minimise the risk of the complications of immobility and improve functional recovery.

Balance

Balance difficulties are common for many individuals post stroke usually due to a combination of reduced limb and trunk motor control, altered sensation and sometimes centrally determined alteration in body representation such that the person misperceives their posture in relation to the upright.

Impaired balance often leads to reduced confidence, fear of falling and increases the risk of falls.

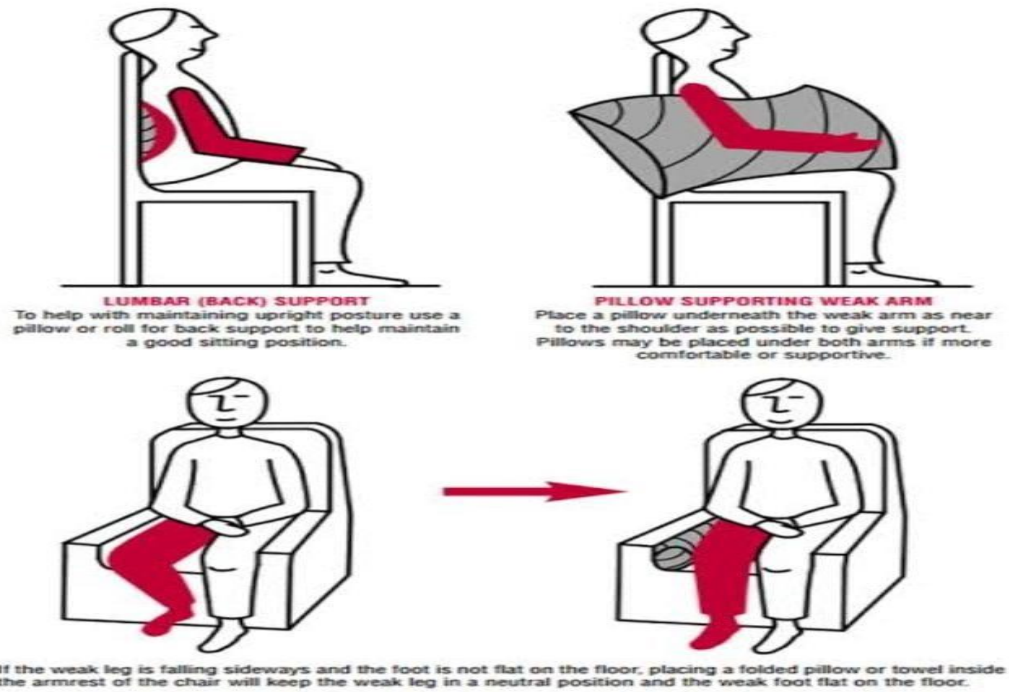
Current evidence suggests that trunk exercise training improve trunk performance and dynamic sitting balance while task specific training improves dynamic balance in both sitting and standing.



Sitting

Practising reaching beyond arm's length while sitting with supervision/assistance should be undertaken for individuals who have difficulty with sitting.

SITTING



Standing

Practising functional task-specific training while standing

Providing visual or auditory feedback

Receive progressive balance training

Receive lower limb strengthening exercise



Gait & Mobility

The highest priority for many people with limited mobility after stroke is to walk independently. This section focuses on treatments and equipment aimed at improving walking and includes exercise.

Individuals post stroke benefit from time spent in task-specific, walking-orientated leg exercises which have a cardiorespiratory focus both early and late after stroke.

Interventions should be of a sufficient intensity with a focus on progression, task-specificity and challenge to improve outcomes and can include strengthening exercises for the leg, over-ground walking, circuit classes and treadmill training with and without body weight support.

Affected side swing phase –knee joint

- Problem 4-2(swing phase) knee doesn't flexion on initial phase

因為Extensor tone 而使knee 成extension



Treadmill Training

Treadmill training can be utilised for both Gait Re-education / Training but also to aid improvements in aerobic function.

Treadmill training can be completed with the patient's body-weight partially supported by a harness in order to grade the amount of body weight supported, which is used for individuals with significant functional limitations.

Speed dependent treadmill training without a harness may also be utilised.

Therapists facilitate alternating stepping and weight-bearing, and as many as three therapists may be required to assist with the complete gait cycle.

Overground Walking

It involves walking and walking-related activities on a solid surface, where the physiotherapist observes the patient's gait, usually on a level surface, and has the patient do a range of different activities and exercises to influence their gait.

The benefit is that over-ground gait training can be used in almost any setting or location without requiring a great deal of high-tech equipment.



Electromechanical Assisted

Electromechanical-assisted gait training, with and without partial body weight support as well as with or without FES.

They are used as adjuncts to overground gait training for the rehabilitation of patients after stroke and can be used to give non-ambulatory patients intensive practice (in terms of high repetitions) of complex gait cycles.

The main difference between electromechanical-assisted and treadmill training is that the process of gait training is automated and supported by an electromechanical solution.

Current research indicates that repetitive gait training in combination with physiotherapy may improve walking ability in patients after stroke

Community Walking

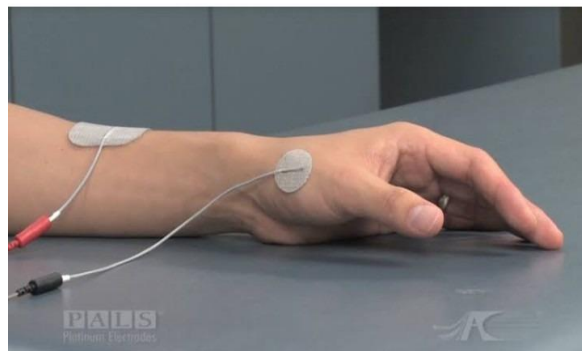
Individualised goals should be set and assistance with adaptive equipment, information, and further referral on to other agencies should be provided for individuals who have difficulty with outdoor mobility in the community.

Walking practice may benefit some individuals and if provided, should occur in a variety of community settings and environments, and may also incorporate virtual reality training that mimics community walking.

Electrical Stimulation

Functional Electrical Stimulation appears to moderately improve upper limb activity compared with both no intervention and training alone.

Current evidence suggest that electrical stimulation should be used in stroke rehabilitation to improve the ability to perform functional upper limb activities.



Robot Assisted Arm Training

Robot-mediated treatment utilises automated devices to provide passive, active or

resistive limb movement which could allow for extended periods of treatment and treatments that are responsive to the particular needs of the individual by using the person's movement as feedback, as ability changes over time.

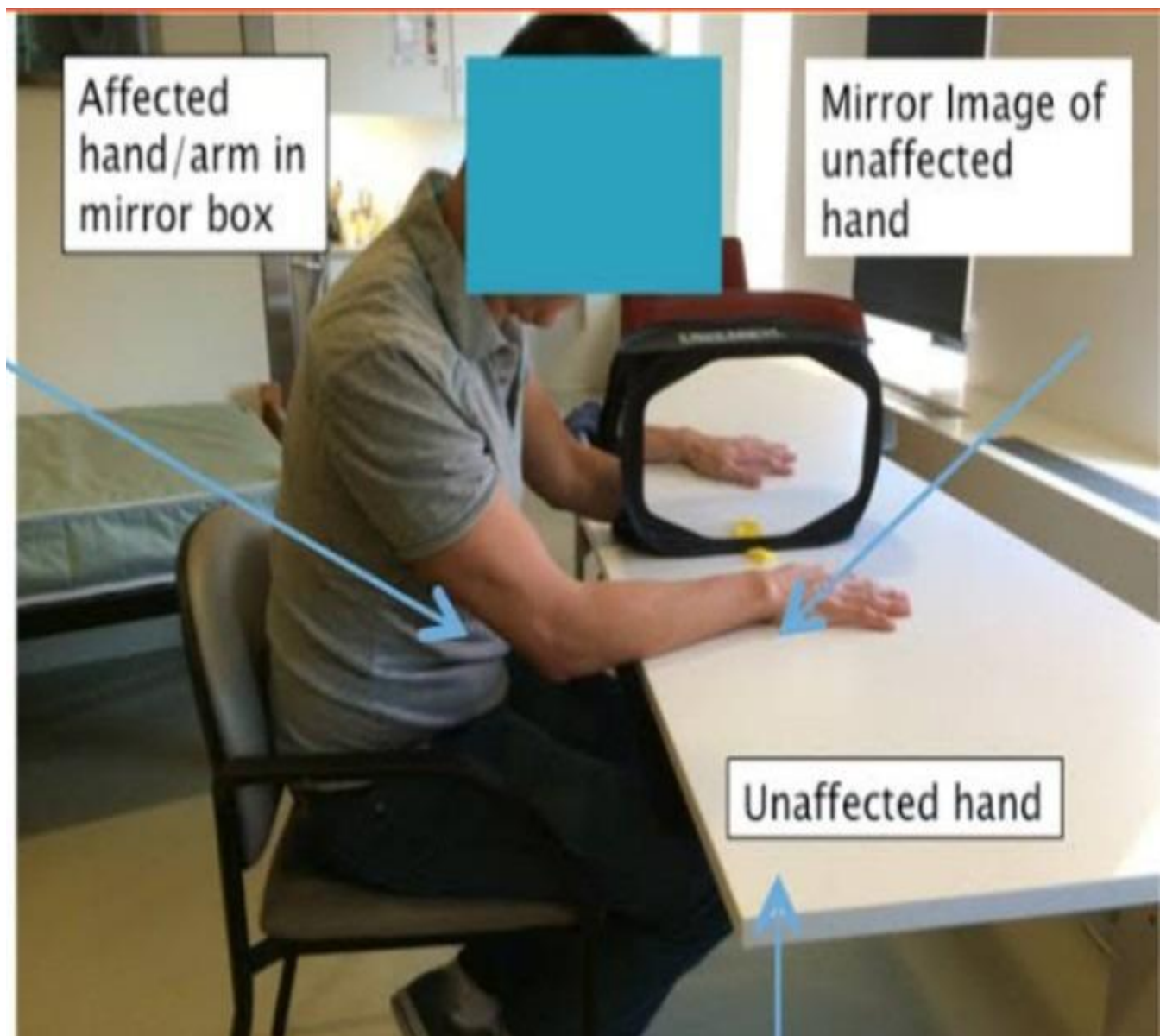
There is currently conflicting evidence as there is still limited evidence to suggest when or how often robot assisted arm movement should be used.

People with reduced arm function after a stroke should only be offered robot-assisted movement therapy or neuromuscular electrical stimulation as an adjunct to conventional therapy in the context of a clinical trial.



Mirror Therapy

Mirror Therapy may be used as an adjunct to routine therapy to improve arm function after stroke for individuals with mild to moderate weakness, complex regional pain syndrome.



PHYSIOTHERAPY IN ONCOLOGY

NAME - Cijoy samuel

BPT 3RD YEAR D SECTION

Abstract

Physical therapists often treat cancer patients. Cancer treatment includes chemotherapy, radiotherapy, and surgery, which are being continuously developed and thus increase survival of patients with each cancer diagnosis. More specifically, 5-year survival rates increase with each cancer diagnosis. Cancer patients have many problems including muscle weakness, pulmonary dysfunction, fatigue, and pain. In the end, patients with cancer tend to have a decline in activities of daily living (ADL) and quality of life (QOL). Additionally, cancer patients often have progressive disease, depression, and anxiety. Physical therapy often helps patients regain strength and physical function and improve their QOL and independence of daily living that they may have lost due to cancer or its treatment. Physical therapy has an important role in increasing physical function of cancer patients, cancer survivors, and children with cancer. In the future, physical therapy may be progressively needed for management of cancer patients

Introduction

Cancer and its treatments can result in impairments, which can affect multiple body systems. These impairments restrict physical functioning and participation in activities of daily living and life roles of many patients, consequently limiting their quality of life. Many such impairments are amenable to physiotherapy interventions. Numerous studies have shown beneficial effects of physiotherapy interventions – including exercise programs – on joint pain and range of motion, physical functioning, physical fitness, fatigue, and health related quality of life.¹ However, the integration of physiotherapy services into cancer care continues to languish.^{2,3} Recently, the Clinical Oncology Society of Australia acknowledged the importance of exercise in the cancer continuum by issuing a guideline recommending that exercise prescription be embedded as part of standard practice in cancer care, with patients referred to exercise professionals with experience in cancer care, including physiotherapists.⁴ Additionally, the National Cancer Policy Forum in the United States published recommendations for better integration of rehabilitation services into cancer care, including physiotherapy, ideally starting at the point of cancer diagnosis, in order to reduce long-term, treatment-related adverse effects and disability.⁵ Clearly, physiotherapy has an important role to play in cancer care. Are we up to this task, or do we need to step up our game? This manuscript provides international perspectives on these questions; they were obtained using an interactive plenary discussion at the first

International Conference on Physiotherapy in Oncology

International Conference on Physiotherapy in Oncology 2018 The first International Conference on Physiotherapy in Oncology (an open congress) took place in Amsterdam, June 2018. There were 280 physiotherapists representing 30 countries from African, Asian, European, and North and South American regions. The objective was to present scientific and professional developments in the field of oncology physiotherapy and enable international collaboration and idea exchange. The conference program included an interactive, plenary panel discussion with subject matter experts, representing Australia, Canada, Chile, Denmark, the Netherlands, Spain, and the United States. Panellists were queried for input on their nation's experiences and asked to identify successes and challenges in the field of oncology rehabilitation. The audience participates via an interactive Audience Response Systems . Clear themes and relative agreement became apparent regarding the current state of affairs, challenges, and future directions for physiotherapy in oncology. The current status of physiotherapists in oncology Participants agreed that education for entry level to practise already enables physiotherapists to play a role in the detection and management of many cancer-related impairments (eg, pain and reduced range of motion or physical fitness) that may preclude patients from engaging in activities of daily functioning and participating in life roles. Most physiotherapists can manage these impairments and help patients adapt to functional loss or chronic symptom burden by teaching coping strategies, maximising compensation capacity, and improving ergonomics of (alternative) movement strategies. Yet, more specialised knowledge about cancer treatments and their side effects, as well as advanced skills, are desirable to support individuals with cancer in their specific needs throughout the cancer care continuum. This includes, but is not limited to, the management of lymphoedema,^{6,7} peripheral neuropathy,⁸ and cancer-related fatigue.⁹ The panel representatives identified existing, and the ongoing development of, postgraduate educational programs and Master programs to advance oncology-specific knowledge and skills. This includes board specialty examinations and accompanying credentialing. In addition, the national physiotherapy associations of several countries – including Australia, Canada, Chile, Denmark, Netherlands, and USA – have established dedicated oncology sections. There was also strong agreement that the growing evidence base for the effectiveness of physiotherapy interventions in the oncology population has helped to improve integration of rehabilitation services into cancer care.

Challenges for broader implementation and further advancement of oncology physiotherapy During the panel discussion, it became clear that there are three major challenges to successful implementation of physiotherapy in cancer care, which were shared and generally agreed upon among representatives from all 30 countries. These were: costs associated with access to physiotherapy care; insufficient awareness of benefits of and lack of referral pathways to physiotherapy services for individuals with cancer; and the need for capacity building of the physiotherapy workforce - including specialisation.

Costs

In many countries, access to physiotherapy services in cancer care is inadequate or even absent. Services provided within public healthcare systems are limited (ie, Canada, UK, and USA) or there is little third-party insurance coverage for services in other private healthcare systems. Legislative efforts have yielded marginal success, usually targeting one specific population or disease type (eg, the USA Women's Health and Cancer Rights Act) but fail to address the needs of the greater population, especially as they move beyond active medical disease treatment. Moreover, legislation does not always keep up with the rapid changes in the field of cancer care. For example, in the Netherlands, basic insurance partially covers physiotherapy-supervised exercise during adjuvant chemotherapy, based on the preceding hospital admission. However, since neoadjuvant therapy has become the standard treatment for some cancers (eg, breast cancer), patients can no longer apply for reimbursement for the same intervention, as they have not yet been hospitalised. While the evidence base underpinning the effectiveness of physiotherapy interventions for individuals with cancer is growing, cost effectiveness data are currently limited to a few studies.^{10–12} Cost containment is foremost among governments, regulators, and healthcare insurers. Physiotherapy interventions have great potential for cost mitigation through prospective rehabilitation services, and through mitigation of functional decline during and after cancer treatments. However, in the absence of evidence that demonstrates this economic benefit, payers have limited incentive to improve reimbursement for physiotherapy in cancer care.

Awareness and referral

The lack of referral pathways that engage physiotherapists in cancer care is likely a result of limited awareness of the benefits that physiotherapy can offer individuals with cancer, and of the importance of the timing of physiotherapy interventions. The limited time available in an oncology consultation may push the dialogue on rehabilitation or supportive care to the background, in favour of discussing the likelihood of survival, medical treatment planning, and pharmaceutical symptom control. Panellists asserted and participants agreed that embedding physiotherapists in cancer care clinical pathways allows easy and timely referral to physiotherapy services. Participants at the conference from a variety of countries (Qatar, USA, Iran, etc) provided examples of this model of care being implemented with great success. In addition to increasing referrals, this approach encourages a move from reactive to more proactive physiotherapy. In a traditional model of supportive care, referral or self-referral to a physiotherapist is at the discretion of the physician or the patient, and happens only once an impairment has been identified and often when it has already led to a disabling state. Adopting a more proactive approach has the potential to improve supportive cancer care.¹³ Impairments – in particular declines in exercise capacity – and symptoms such as fatigue or pain can be prevented or minimised by timely interventions. Several studies have shown that supervised exercise during active cancer treatment can reduce negative side effects, and may even improve medical treatment fidelity and survival.^{14,15} Prehabilitation and prospective surveillance are a promising area for physiotherapy, where early physiotherapeutic intervention – including exercise and routine monitoring of impairments – may lead to improved functional status and health service benefits, including reductions in length of stay and health-related expenditure.^{1,16} This may be particularly valuable for individuals at risk of a poor functional outcome due to poor baseline health status, and those with low self-efficacy, the

elderly, and those who lack social support or have low health-literacy.¹⁷ Engaging physiotherapists throughout the trajectory of cancer care enables ongoing assessment of changes in physical function that will occur due to the disease or its treatment. Functional gains and losses necessitate ongoing surveillance and guidance to manage impairments that arise, as well as to accommodate exercise prescription. This will only be achieved by incorporating physiotherapy as a standard part of the workflow of a cancer centre, and having dedicated physiotherapy staff who can provide consultative assessment and triage to the appropriate setting of care. The physiotherapist provides a unique role that complements the cancer team by providing insights on functional movement. Capacity building and specialisation Panellists and the audience agreed that in order to provide safe and effective interventions, physiotherapists working with individuals with cancer need to have an understanding of the mechanisms of anti-cancer therapy and how these affect physiological systems involved in human movement.¹⁸ In addition, since the majority of individuals with cancer also have one or more comorbidities, a high level of clinical reasoning is required.¹⁹ A cancer diagnosis often comes with a high psychosocial and existential burden, and many patients have anxiety or depressive symptoms, which need to be recognised and accounted for during physiotherapy treatment. Managing these issues requires high-level communication skills. Therefore, additional education in oncology is a prerequisite for physiotherapists who want to be fully capable of providing high quality care to people with cancer. This supposition is supported by the US Institute of Medicine report *Delivering High-Quality Cancer Care*, which identifies the need for the healthcare workforce to have advanced education and training in oncology in order to optimise the quality of care for this population.²⁰ In physiotherapy practice, specialisation commonly has several levels. High-level specialists or the most advanced practice-trained individuals may primarily practise within a specialised cancer care setting, but also act as consultants to physiotherapists with lower levels of specialisation who see cancer patients in a more general inpatient medical or outpatient setting. These physiotherapists, who are capable of treating the majority of health problems associated with cancer, can consult or refer to the specialists in specific, complex cases. In the Netherlands, there are accredited Master-level postgraduate programs in oncology to advance the clinical specialty skills needed for this complex population, as well as entry-level and intermediate-level postgraduate courses. Several other countries (ie, the USA) are currently developing such programs.

Recommendations for Action

The discussions at the International Conference on Physiotherapy in Oncology demonstrated that the challenges for physiotherapy in oncology care are quite similar across international boundaries. Also, they provided a starting point for improving the quality and availability of physiotherapy services for individuals with cancer. First, it is important to develop professional practice guidelines and standards for physiotherapy in oncology. Such an effort would improve awareness among physiotherapists and other healthcare providers regarding optimal care standards, and will improve consistency in care delivery and reduce unwanted practice variation. Second, physiotherapy associations should engage in advocacy to highlight inequity in healthcare services and to encourage payment schemes that support physiotherapy for individuals with cancer throughout the disease and treatment continuum. Third, addressing oncology-related problems explicitly in entry level physiotherapy education, and showing physiotherapy students how the basic principles of physiotherapy apply to issues in oncology, would

create a strong foundation for advanced clinical practice and catalyse interest towards postgraduate pursuit of specialty practice in oncology. The panel further recommended that physiotherapy researchers should consider approaches to health services research that can study cost and healthcare utilisation mitigation through physiotherapy interventions. On the levels of research and practice, enhanced international collaboration and communication between physiotherapists working Editorial 187 in oncology are desirable. This could be facilitated by the continuation of the International Conference on Physiotherapy in Oncology as well as through the World Confederation for Physical Therapy (WCPT) international subgroup IPT-HOPE . At a national level, physiotherapy associations need to make an effort to increase awareness of the potential of physiotherapy among other healthcare professionals in oncology, and develop and implement care models that are suited to their individual in-country system constraints. The World Health Organization's Vision 2030 also offers an opportunity for international collaboration to coalesce around goals that target reducing cancer-related disability in an equitable and sustainable way. In conclusion, physiotherapists have strong foundational knowledge and skills in oncology and they are playing an increasingly important role in the management of individuals with cancer. As this field grows and matures, international collaborations towards shared goals in clinical practice, education, and research could significantly enhance the integration of physiotherapy services in the cancer care continuum and ultimately improve functional outcomes and quality of life for cancer survivors

Rehabilitation for Cancer Patient

Stages of Cancer

Stage Characteristics

Stage 1 Cancer is relatively small and contained within the organ it originated from. This stage describes cancer in situ, which means "in place." Stage 1 cancers have not spread to nearby tissues. This stage of cancer is often highly curable, usually by removing the entire tumor with surgery

Stage 2 Cancer has not started to spread into surrounding tissue but the tumor is larger than in Stage 1. Sometimes, Stage 2 means that cancer cells have spread into lymph nodes close to the tumor. At this stage, cancer or tumor is relatively small and has not grown deeply into the nearby tissues. It also has not spread to the lymph nodes or other parts of the body. It is often called an early-stage cancer

Stage 3 Cancer is larger. It may have started to spread into surrounding tissues, and cancer cells may be present in the lymph nodes of the area. This stage indicates larger cancers or tumors

Stage 4 Cancer has spread from where it started to another organs or parts of the body. This is also called a secondary, advanced, or metastatic cancer

Four Cancer Rehabilitation Stages.

Stage

(1) Preventive

Intervention focused on improving the patient's level of function prior to the onset of the effects of the cancer and its treatment, patient education, and psychological support

(2) Restorative rehabilitation

Intervention focused on returning the patient to a previous level of function and addressing impairments from cancer and its treatment

(3) Supportive rehabilitation

Intervention is meant to assist the cancer patient to function at the highest level within the context of his or her impairments, activity limitations, and participation restrictions

(4) Palliative rehabilitation

Intervention focused on minimizing complications such as pressure ulcers, contractures, and muscle deconditioning ensuring adequate pain control and emotional support for the family

Quote

"Yesterday is history, tomorrow is a mystery, but today is a gift – that's why it's called 'the present.'"

– Bill Keane

PHYSIOTHERAPY IN WILSON'S DISEASES

M.VIGNESH

3RD YR D SEC

WILSON'S disease is an inherited condition which copper is not excreted properly from the body. The excess copper can be build up in the liver and or brain causing liver damage and or neurological problem. It also can be collect in other parts of the body including the eyes and the kidney. Copper being accumulate immediately after that birth but the symptoms usually appear in the 2nd to 3rd decade.

The first signs are

- hepatic(liver) in about 40% of cases,
- neurological (brain)in about 35% of cases,
- Psychiatric
- Renal (kidney)
- Haematological (blood)
- Endocrine (glands)

PREVALENCE

WILSON'S disease is at are condition affecting only one person in 30000 in most population. This condition is considered an autosomal recessive. The gene frequency for this disease has been found to be 56 % with the carrier frequency of 1 in every 90 people.

NEUROPSYCHIATRIC SYMPTOMS

About half the people with WILSON'S disease have neurological or psychiatrist symptoms. Most initially have mild cognitive deterioration and clumsiness, as well as changes in behavior. Specific neurological symptoms usually then follow, often in form parkinsonism with or without a typical hand tremor, masked facial expression, slurred speech, ataxia or dystonia.

Condition can also be affected in WILSON'S disease.

Psychiatrist problem due to WILSON'S disease may include behavioral changes, depression, anxiety and psychosis. Psychiatrist symptoms are commonly seen in conjunction with neurological symptoms and are rarely manifested on their own.

These symptoms are often poorly defined and can sometimes be attributed to other causes. Because of this diagnosis of WILSON'S disease is rarely made when only psychiatrist symptoms are present.

PHYSIOTHERAPY

- Physiotherapy is beneficial for patient with the neurologi form of the disease. The copper neurological treatment may take up to six months to start working and physical therapy can assist in coping with ataxia, dystonia, and tremors, as well as prevention the development of contractures that can result from dystonia. Maintenance therapy is more important than rehab.

- Relaxation techniques is more important to maintain posture. To reduce hyper activeness use sedative otherwise due to hyper activeness rigidity will increase and result will be dislocation/fracture/injury of some joints/bones or muscles/ligament injury. To avoid torticollis maintain the position of and do the proper exercise and stretching.

REHABILITATION OF THE BURN PATIENT

INTRODUCTION

The rehabilitation for patients with burn injuries starts from the day of injury, lasting for several years and requires multidisciplinary efforts. A comprehensive rehabilitation programme is essential to decrease patient's post-traumatic effects and improve functional independence.. While different professionals possess expertise in their own specialities, there are some simple and effective methods that can be utilised to help the patient reach their maximum functional outcome. It is the dedication of the individuals within the burn team and the commitment to caring for the patient and encouraging them to participate and engage fully in their rehabilitation, which can make such a difference to their long-term quality of life.

STAGES OF REHABILITATION

Rehabilitation of burns patients is a continuum of active therapy starting from admission. There should be no delineation between an 'acute phase' and a 'rehabilitation phase', as this idea can promote the inequality of a secondary disjointed scar management. The stages of rehabilitation have been divided into early stages and later stages of rehabilitation; although, it must be understood that there may be significant crossover between these two stages depending on the individual patient.

EARLY STAGES OF REHABILITATION

Depending on the size and severity of the injury, the patient's age and other pre-morbid factors, this stage can last from a few days to several months. The patient may be an inpatient or may be treated as an outpatient and is likely to be undergoing regular dressing changes, which are often painful and may also be a very frightening experience for the patient.

Regular pain relief is essential, in particular prior to all interventions such as change of dressing and exercise; this needs to be given in adequate time to take effect before commencing the procedure. The aim of analgesic drugs should be to develop a good baseline pain control to allow functional movement and activities of daily living to occur at any time during the day. Inadequate pain relief in the early stages can result in a complete reluctance of the patient to participate in their rehabilitation in both the short and long term.

Early commencement of rehabilitation is the key to compliance with treatment and maximising long-term outcome. When the various aspects of rehabilitation are introduced as an integral part of care from day one, whether the patient is an in-patient or out-patient, they are easier for the patient to accept and follow rather than as an additional element to their care at a later date when contractures are already developing.

,CRITICAL CARE

It is essential that physical rehabilitation is commenced at day 1 of admission whether the patient is ambulant and well or on bed rest and immobile.

When a patient is admitted with severe burns, it is essential to reduce the risks, as far as possible, of further complications arising. Postural management of the patient by elevating the head and chest helps with chest clearance and reduces swelling of the head, neck and upper airway. In the early stages, significant oedema may be present particularly in the peripheries; poor positioning can lead to unnecessary additional morbidity which can be avoided. Elevation of all limbs affected is necessary in order to quickly reduce oedema; hands should be splinted or positioned and feet kept at 90 degrees, care and attention must also be given to the heel area which can quickly develop pressure. Legs should be positioned in a neutral position ensuring that patient is not externally rotating at the hips.

Patients who are unable to move should have passive movements completed to maintain range of movement (ROM) and prevent stiffness developing. If due to surgical intervention and skin grafting this is not possible on a daily basis, it may be achieved during change of dressings.

PSYCHOLOGICAL IMPACT

It is important to remember that burn patients have often experienced a very frightening event leading to their burn injury and that the hospital experience itself can be frightening. Patients and family members may be experiencing significant feelings of guilt, anger and despair; they may also be having nightmares and flashbacks of the event. While professionals may treat many people in one day, the experience for each individual patient is personal and their experience can impact on their mental wellbeing and readiness to participate in their treatment. It is important that the patient is given comfort and reassurance that they are safe. Taking the time to listen to the patient's concerns, demonstrating genuine empathy and compassion, providing adequate information and answering their questions can often go a long way to alleviating fears, which in turn can ease the treatment process for both patient and professional.

ANTI-CONTRACTURE POSITIONING

Anti-contracture positioning and splinting must start from day one and may continue for many months post-injury. It applies to all patients whether they have been skin grafted or not. Positioning is important to influence tissue length by limiting or inhibiting loss of ROM secondary to the development of scar tissue. Patients rest in a position of comfort; this is generally a position of flexion and also the position of contracture. Wounds start the healing process almost as soon as they occur and a major part of this process is wound contracture

Burn wound not being nursed in anti contracture position with impending neck and axillary contracture Without ongoing advice and help with positioning, the patient will continue to take the position of contracture and can quickly lose ROM in multiple joints. Once contracture starts to develop it can be a constant battle to achieve full movement, so preventative measures to minimise contracture development are necessary. Early compliance is essential to ensure the best possible long-term outcome and also to ease pain and assist with exercise regimes.

Patients need to adhere to a positioning regime in the early stages of healing and this takes teamwork and dedication. The patient requires encouragement to maintain anti-contracture positioning all of the time (except for when carrying out exercise programmes and functional activities), not just during the time when the therapist is available to complete their ward round; support of the patient's family can be crucial at this stage to assist the patient in maintaining the correct position when the hospital staff are not available. Educating the patient and family so they have a good understanding as to the benefits of participating in therapy is essential and getting the family on board at this early stage also means that they are more prepared to assist the patient on their return home.

It is crucial not to overlook patients who have relatively minor burns as they may also develop serious and debilitating contractures, which could be easily avoided by positioning, splinting and exercises.

When burns occur to the flexor aspect of a joint or limb the risk of contracture is greater. This is due to the position of comfort being a flexed position; also the flexor muscles are generally stronger than the extensors so should a burn occur to the extensor aspect, patients can use the strength of the flexors to stretch the particular area. The flexed position is the position of function for example clasping the hand, forward flexion of the shoulder and flexing the neck.

STRETCHING AND EARLY MOBILISATION

Joints affected by burns should be moved and stretched several times a day and the patient is likely to require assistance of members of the burn team and family to reach full range of movement. Therapists use clinical judgement based on the appearance of the tissue as to whether passive range of motion (ROM) or active ROM is performed and also to determine when ROM is resumed after immobilisation. Patients require development of movement habits that are patient specific from day of injury, not when surgery has been completed or dependent on the wound being partially or completely healed. Children may need additional encouragement, therefore the understanding and participation of their parents is crucial from an early stage as they will be helping the child carry out their exercise and stretching regime. Games which incorporate therapy goals such as stretching to catch a ball, reaching and bilateral use of hands depending on the site of injury and therapeutic needs should be encouraged. Pain control is essential to make this process as easy as possible for the patient as it is common for patients to be extremely reluctant and fearful to move if this will cause severe pain. They should be encouraged to mobilise as soon as possible post-injury. Stiffness is common in burn patients both in joints effected by a

burn injury and in other joints when immobilised for periods of time. Splinting should be accompanied by regular exercise regimes as contractures can occur, as well, in desirable positions if a patient is persistently splinted and restricted to that position. Patients should be encouraged to get out of bed and exercise as soon as they are fit enough to do so. Therapeutic exercise encompasses ambulation of joints, consideration of neurovascular integrity, improving cardiovascular and respiratory capacity, coordination, balance, muscle strength and endurance, exercise performance and functional capacity. Exercise also helps the patient to experience a general feeling of wellbeing and a sense of confidence and achievement.

Before starting to mobilise a patient, it is important to check there has been no recent surgery, for example skin grafting, or medical issues that contraindicates getting the patient up and moving. Aim to mobilise all patients as soon as possible, if unwell closely monitor vital signs and make continued assessments. If the patient will ultimately not have mobility problems ask relatives to give ongoing support to the patient to exercise. Give consistent encouragement and start slowly, gradually building up the patient's confidence and exercise tolerance; burn patients often tire quickly so this should be

ENCOURAGE ACTIVITIES OF DAILY LIVING

Burn patients often feel a sense of loss of role and ability to participate in normal activities of life. Activities of daily living play an extremely important role in a burn patient's successful outcome. If a patient can accept the responsibility of self exercise and activities of daily living, then the most difficult aspects of rehabilitation are easily achieved. It is crucial to involve patients in daily activities such as eating and washing themselves as soon as possible. Family members should be discouraged from completing these activities for the patient as this emphasises the 'sick role' and increases reluctance of the patient to actively participate in their rehabilitation. Highest levels of independence should be encouraged in all activities of daily living from as early as possible.

Participation in their own cares quickly gives the patient an increased sense of wellbeing and control over their environment. Increased ability to perform activities of daily living leads to increase in self-esteem, self-worth and sense of independence and leads to increased motivation levels and desire to improve. Bathing, toileting, feeding, grooming, dressing and vocational skills also incorporate therapeutic goals, for example increased ROM and strength, fine motor and balance. It is important to remember that a child's vocation is play; children should be encouraged to play and participate in their normal routines as part of their rehabilitation.

EDUCATION

It is essential that the patient is educated at every stage as to the reasons for the various aspects of their burn rehabilitation and why their participation is crucial to ensure the best possible outcome. Education is of paramount importance along with a consistent approach from all members of the multidisciplinary team. Some individuals will require information to be repeated many times and it is important to make

sure they thoroughly understand what they need to do and why. Ongoing education will help the patient take responsibility for their own rehabilitation and in turn help to improve compliance. Initial reluctance due to frustration, pain and fatigue is to be countered by encouragement and education.

LATER STAGES OF REHABILITATION

Psychological impact

Excepting the most superficial burns, by definition, we are engaged in treating a chronic condition.

There is a groundswell of opinion and literature that strongly supports the use of early intervention and the bio-psychosocial model in other patient populations. This model is particularly pertinent for burns survivors.

Psychological difficulties can occur at any stage following a burn injury. Some individuals find that the impact of the trauma of the initial event may only start to affect them once they are discharged from hospital. Initially the patient may appear to be dealing well with their injury and change in circumstances; however, once the permanence of the situation has become a reality and the longevity of the rehabilitation process is realised, the patient can then start to experience psychological difficulties in the form of depression, anger and anxiety; they may also experience feelings of loss, grieving for their former life, identity and function. If an individual is affected in this way, it is important that they receive the right support and reassurance. Children may show signs of regression in their development and may temporarily become more reliant on their parents than they were prior to their burn injury.

SCAR MANAGEMENT

Hypertrophic scarring is common following a burn injury and may cause significant functional and cosmetic impairment. The longer a wound takes to heal, the greater the likelihood of hypertrophic scars developing; the risk increases significantly when a wound takes 21 days or longer to heal. Hypertrophic scars are an exaggerated response of the body's healing process; they have a high blood flow and increased levels of collagen and are extremely active becoming raised, red and rigid. These scars tend to have a high rate of contraction and have other symptoms associated with them including itchiness, dryness and lack of pliability. Hypertrophic scars are generally at their most active for the first 4–6 months post-healing. Initially a scar may appear flat when it is first healed but it is important to monitor scars closely as they may suddenly start to show signs of hypertrophy. It is common for patients to be discharged from hospital with full ROM; however, several weeks later, if corrective measures are not taken to oppose the contractile force of the scar, ROM is lost and scar contracture occurs. Scar management for post-burn injury is a long and often painful process; it is not something that can be carried out for a few weeks and then abandoned, it is something which must continue for many months to minimise post-burn complications from occurring. There is no consensus regarding the best treatment to reduce or prevent hypertrophic scarring; at present little can be done to prevent the formation of scar tissue but a multitude of treatment interventions are used to avert the malady of

wound and scar tissue contracture and reduce the impact of the scarring process.

Positioning

Anti-contracture positioning should continue to be encouraged for many months post-injury whenever the individual is at rest.

Splinting

Splints prescribed are not only essential for positioning but also for stretching and lengthening the contracted scar tissue. Continued early splintage removed only for exercise and specific functional activities can maximise long-term outcome and can be continued for 6 months post-healing to 2 years or sometimes longer in children. Initially splints are worn for most of the day and night – sometimes for many months depending on scar activity. The splinting regime should be reduced gradually to overnight splinting once ROM is being maintained. The overall length of the scar tissue will be increased by mechanical stretching after application of splintage as splinting is the only therapeutic modality that applies controlled gentle force to soft tissue over a prolonged period of time to cause tissue growth. Continued use of splints helps significantly to stretch scar tissue as it forms, apply pressure to problem areas and maintain anatomical contours - for example of the hands, axilla and neck. A well fitting splint is extremely effective in maximising long-term functional outcome; sometimes compromising function in the short term. Splinting and positioning should always be accompanied by an active exercise and stretching regime. Measurements of range of motion are critical guideposts for defining splint efficacy.

Stretching and exercise

In the early stages, post-wound healing scars are extremely active and dynamic and the contractile force is at its highest. If the burn is close to or over a joint, it must be stretched to avoid loss of ROM and to prevent a post-burn contracture developing. Preventative and maintenance exercises and splinting programs, employed prior to the development of contractures, are crucial to preserving required functional soft tissue length and glide. Stretching of affected joints several times a day to their maximum functional range, in conjunction with a splinting regime appears to help elongate the scar tissue maintaining ROM. However, if compliance of this regime is not maintained often over many months then the scar will once again contract.

It is important that the individual maintains a good exercise regime, which will also help to stretch scar tissue as well as improving exercise tolerance and maintaining a positive mental state.

Massage and moisturising

Scar massage is widely advocated as an integral part of burn scar management; while the exact mechanisms of its effects are not known, it appears to help in several ways:

- Application of a moisturiser - burn scars are often lacking in moisture depending on the depth of the injury and the extent of the damage to the skin structures. They can become very dry and uncomfortable and this can lead to cracking and breakdown of the scar. By massaging with an unperfumed moisturiser or oil, the upper layer of the scar becomes softer and more pliable and therefore more comfortable; this also helps to reduce itching which can also be a common problem.
- When scars become thick and raised, they hold additional fluid which reduces their plasticity. Through deep firm massage of the scar using the thumb or fingertips, the effect of this excess fluid can be reduced. Massaging while performing stretches helps to increase ROM of a limb affected by a burn scar.
- Burns scars contain four times more collagen than other scars which is rapidly laid down in whorls and bundles. Deep massage of the scar in small circular movements is thought to help improve with alignment of the scar tissue as it is formed.
- Sensory impairment and changes in cutaneous sensation is common in burn scars. Regular massage and touching of the scars helps with desensitisation of hyper-sensitive scars.
- Psychological factors of individuals having difficulty in coming to terms with having, what they feel is, an unsightly scar can also be reduced by touching the scar and learning to accept how it looks and feels.

Pressure therapy

Pressure therapy is a primary modality in burn scar management although the clinical effectiveness has never been scientifically proven. Applying pressure to a burn is thought to reduce scarring by hastening scar maturation and encouraging reorientation of collagen fibres into uniform, parallel patterns as opposed to the whorled pattern seen in untreated scars. There is little written evidence around its mechanism but it is thought to create localised hypoxia to the scar tissue reducing blood flow to hyper-vascular scars and therefore reducing the influx of collagen and decreasing scar formation. As soon as the wounds are fully closed and able to tolerate pressure, patients are fitted with pressure garments.

When available, made to measure pressure garments are fabricated for the individual which apply a consistent level of pressure. When made to measure garments are not available, other materials can be used as effective replacements such as 'tubi-grip' elastic support bandages, 'lycra' swimwear and cycling shorts, sports head and wrist bands, bandages and to small areas breathable tape can be used. Pressure garments appear to help

- reduce scar thickness/lumpiness

- reduce scar redness
- reduce swelling
- relieve itching
- protect newly healed skin/graft
- prevent contractures/ maintain contours

Pressure garments must be applied as early as possible for maximum effect and worn for 23 h removing only for washing and creaming of scars. In hot climates, however, some patients experience difficulties due to heat and humidity in which case the wearing regime may need to be adjusted in order to accommodate more regular removal. If a patient has taken a long time to heal and if they have had skin grafting, they should be provided with a pressure garment as soon as possible post-healing. If they have had an extensive burn and scattered small unhealed areas remain, a pressure garment can be applied with small topical dressings applied beneath it.

Silicone

Silicone is another modality used to treat hypertrophic scarring. The exact mechanism of action of silicone in the prevention and management of hypertrophic scars is unclear, although it is likely to influence the collagen remodelling phase of wound healing. It appears to soften, flatten and blanch the scar, making it comfortable and improving its appearance.

Activities of daily living

Individuals should be encouraged to return to their normal daily routines as soon as possible and should re-establish themselves in their roles in life prior to their burn injury as much as they can.

Social rehabilitation

Following a burn injury some individuals can feel isolated and alone. They may find it difficult to integrate back into society and take up life as they knew it prior to their injury. They may feel like they are the only one who has suffered such an injury and they may not know how to re-enter society, particularly if they have visible burns scars. These individuals should be encouraged in order to re-establish themselves in their social and vocational lives as soon as they are able to, and their family members should be encouraged to promote this behaviour. For children this will mean re-entering school as soon as they are ready to do so, meeting up with friends and participating in activities and

sports which they enjoy. Sometimes relatives can become very protective of the individual, fearing that something may happen again; in their desire to care for and protect the individual to keep them safe, they can sometimes impede the reintegration process. Life after a burn injury, particularly a major injury can take some significant adjusting to however with the right support and rehabilitation, burn injured patients can lead a full life.

CONCLUSION

Rehabilitation from a burn injury is a lengthy process, which starts on day one and involves a continuum of care through to scar maturation and beyond. It involves a dedicated multidisciplinary team of professionals and the full participation of the patient. Sustaining a burn injury, however big or small can have a dramatic affect on the individual's physical and psychological well-being and requires teamwork and commitment to help each individual overcome the difficulties they may encounter. While the path is not always easy, with the right support and therapeutic intervention, the commitment of the team to not accept even one contracture, and provide understanding of the psychological and social challenges, the patient can reach their maximum physical, psychological and functional outcome.

CHARCOT-MARIE-TOOTH DISEASE

Introduction

Charcot-Marie-Tooth disease (CMT) is known as a hereditary motor and sensory neuropathy (HMSN) and is the most common inherited neuromuscular disease with a prevalence of approximately 1 in every 2,500 . CMT involves the degeneration of nerve fibres in the body that results in muscle weakness and wasting along with a decrease in sensation. CMT is a slowly progressive disorder and it encompasses a large group of clinically and genetically heterogeneous disorders.

Causes

CMT is caused by genetic mutations with approximately 1000 mutations in 80 genes that are related to the physical presentation of the disease. The diagnosis and classification of CMT is a very complicated process. The two main types are Type I which is known as demyelinating CMT (CMT1) and Type II which is known as axonal CMT (CMT2). CMT1A is the most common form of CMT and it is caused by a duplication of the 1.4 Mb region of chromosome 17 containing the peripheral myelin protein 22(PMP22) gene. More information regarding the specifics about the different gene mutations can be found [here](#).

Signs & Symptoms

The signs and symptoms of CMT are extremely variable between each different type due the extensive amount of different mutations possible. Symptoms most often begin in adolescence or early adulthood, but can also begin later in mid-adulthood. It is a progressive disease so the symptoms change between earlier and later stages.

Some of these signs & symptoms may include:

- Fatigue (most common to all those affected): This is a direct result of having to put in additional effort with daily activities
- Early Signs:
- Difficulty walking or an awkward walking pattern: A child may have trouble lifting their feet which may result in tripping
- Clumsiness at a young age

- Lack of agility

- Common symptoms

Pes- Cavus, also known as highly arched feet: This can cause foot and ankle instability issues which may result in ankle sprains.

- Very flat feet

- Curled or hammertoes: This can be very uncomfortable for a child and may cause pain and difficulty finding an appropriate shoe.

- Lower legs are very thin, while the thigh muscles are a normal shape and bulk, or size:This characteristic is known as the inverted champagne bottle

- Some sensory loss and numbness in both the arms and legs :This is not usually a major problem for most individuals, but can result in unknown injuries if it is very severe

- Cold hands and feet due to poor circulation.

Later symptoms

- Upper limbs including both the hands and forearms may be affected as the disease progresses

- Loss of fine motor control

- Loss of dexterity & overall hand strength

- Pain

- Tremors

CMT most often affects the distal limbs first, or those limbs further away from the body such as arms and legs. However, the lower limbs are usually affected before the upper limbs. The muscles in the lower part of the leg, ankle, and foot begin to atrophy as the disease progresses. This means the amount of muscle in these areas will decrease. Atrophy in the more proximal parts of the limbs or the parts closer to the body such as the thighs and upper arms is rare and usually only occurs in those more severely affected. As noted above, this muscle weakness along with a decrease in sensation can cause a lot of problems with both walking without any aid as well as problems with balance.

Medical Management

There is currently no cure or drug therapy for CMT. The main treatment options are rehabilitation therapy which will involve both a physiotherapist and an occupational therapist, and surgical treatment options.

Surgical Treatment

Surgical treatment is used for individuals with CMT with different skeletal deformities most often in their feet. Most individuals start out with flexible deformities in which the ankle begins to turn in, known as a cavovarus deformity. However, during the later stages of this disease, the deformity can become fixed. Treatment options are, therefore, soft tissue surgeries, osteotomies or removal of bone, and joint fusions. These can either be performed on their own or as a combination of a few. Research indicating who is appropriate for surgery and when this would be optimal is not yet conclusive as more in-depth long-term studies must be completed. For the upper limbs, tendon transfers may be beneficial to improve the ability to oppose the thumb and assist with wrist extension. In addition, scoliosis, also known as a curvature of the spine, is prevalent in about 15-20% of individuals with CMT and if severe enough, may need surgical intervention.

Physiotherapy Management

Physiotherapy is a key factor in a child's management. It helps to improve the symptoms of CMT as well as decrease the risk of muscle contractures also known as the shortening of muscles. Physiotherapy will include low-impact exercises, posture and balance work, walking or swimming, and some strength training as well.

Physiotherapy along with occupational therapy should be started at the onset of symptoms. Starting physiotherapy early on can be beneficial because muscle weakness and sensory loss will be at a minimum.

The physiotherapist will also be involved in assessing the need for any additional aids or equipment. Many people with CMT may require high-top shoes or boots in order to provide more stability to the ankles and prevent injury. Others may need braces known as ankle-foot-orthoses (AFOs) which act

similar to a cast, but they are removable. An AFO is a plastic brace, custom made for each individual to provide the necessary support and prevent tripping as a result of foot-drop. If individuals have more muscle weakness proximally or higher up the leg, then knee-ankle-foot orthoses are available.

The majority of individuals with CMT do not require to use of a wheelchair, however, in later stages of the disease some may choose to use one when going longer distances to reduce fatigue and the amount of stress on joints. The physiotherapist will work in conjunction with the occupational therapist and help with referrals to a podiatrist to ensure that all necessary equipment has been provided . More information on different types of adaptive equipment can be found below.

Hydrotherapy

Hydrotherapy is a highly beneficial option as exercise for individuals with CMT. Essentially, it is just structured exercise lead by a physiotherapist that takes place in a pool. Hydrotherapy pools are not always easily accessible, but have many benefits especially for those individuals with CMT. Some of the benefits include reducing the amount of stress on joints due to the buoyancy of the water but still adds some light resistance to exercises in order to help maintain muscle strength More Information on hydrotherapy can be found below.

Aerobic Exercise

Exercise can also be carried out in a gym or at home. Walking, cycling, swimming and mild weight-training are all appropriate exercises that are safe to carry out with CMT. Overall, any type of general exercise will be beneficial for individuals with CMT. As long as that person is comfortable and working at low-moderate intensity, research shows that aerobic exercise can help to reduce fatigue, improve mood, and increase a person's endurance. The goal is to help keep a child as independent as possible for as long as possible. However, it is important to avoid overworking and exhaustion. When carrying out any type of exercise fatigue and weakness should not be caused within 30 minutes of exercises and neither should any form of excessive muscle soreness or cramping. These are things that are strongly discouraged when exercising with CMT.

Stretching

Stretching is also a key part of physiotherapy. As noted above, individuals with CMT are at risk for muscle contractures and stretching assists in maintaining muscle length. When this is done slowly and gently it can provide comfort for individuals and reduce stiffness in the joints. Physiologically, in a disease process such as CMT, where the progression of the condition is due to axonal and demyelinating factors in the peripheral nervous system, application of Proprioceptive Neuromuscular Facilitation (PNF) techniques with elastic or manual resistance, with low impact on the skeletal and muscular system could demonstrate improvement in the capacity of the muscle, without producing fatigue.

Balance and Posture

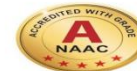
Balance is an extremely important ability in order to carry out daily tasks. It involves gathering sensory input from the body and its surroundings in order to accurately orientate itself with gravity and the environment. With CMT, sensation may be altered which will affect a person's ability to balance and ultimately completely normal activities of daily living. Tai Chi, Yoga, and Pilates are all very useful exercises for improving both balance and posture.



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NATIONAL SERVICE SCHEME CONSOLIDATED EVENTS (2020)

S.NO	EVENT TYPE	TITLE OF THE EVENT	DATE (DD/MM/YYYY)	VENUE	NO. OF PARTICIPANT	CHIEF GUEST / SPEAKER
1.	WEBINAR	INTERNATIONAL YOGA DAY 2020 DAY 1 (AMAZING WAYS TO LIVE HEALTHY AND PEACE)- THE SOLUTION TO ALL THE CONCERNS)	20-06-20	ONLINE MODE, ZOOM & YOUTUBE	200	SRI BAGAVATH AYYASRI BAGAVATH MISSION, SALEM. MR. V. MANIKAVASAKAM. PROFESSOR & VICE PRESIDENT, MANAVALAKALAI YOGA STUDY CENTRE, NAMAKKAL.
2.	WEBINAR	DAY 2-DAILY EXERCISES FOR HEALTHY LIFE, DNA GENETICS	21-06-20	ONLINE MODE, ZOOM & YOUTUBE	200	DR. N. JEGATHEESWARANSR. CONSULTANT PHYSIOTHERAPIST SAKTHI BALA HOSPITAL , RAJAPALAYAM. DR. R. JEYAPAL SKY YOGA PROFESSOR, NAMAKKAL.
3.	AWARENESS PROGRAM	INTERNATIONAL YOGA DAY	21-06-20	ONLINE MODE, POSTER PRESENTATION	100	-
4.	WEBINAR	DAY 3 CAUSE AND EFFECT PHILOSOPHY, ACUPRESSURE 14 POINTS - "AN AMUTHASURAPI	22-06-20	ONLINE MODE, ZOOM & YOUTUBE	200	DR. K.SETHURAMAN, YOGA PROFESSOR, KARE DR. C. VIJAYALAKSHMI THULIRSAKTHI ACUPRESSURE CENTRE RASIPURAM
5.	WEBINAR	DAY 4- NATUROPATHY, NEUROPATHY	23-06-20	ONLINE MODE, ZOOM & YOUTUBE	200	MR.K. BALASUBRAMANIAN NATUROPATHY & YOGIC SCIENCE, RAJAPALAYAM. MR. S. R.VIJAYANAND NEUROTHERAPY CONSULTANT, DINDIGUL



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6.	WEBINAR	DAY 5- LIFESTYLE MODIFICATION FOR HOLISTIC HEALTH, SHAT KRIYAS	24-06-20	ONLINE MODE, ZOOM & YOUTUBE	200	DR B.K.PANDIAMANI DIRECTOR, VALUE EDUCATION PROGRAMMES, BRAHMA KUMARIS, MOUNT ABU MR. K. P. GANGADHARAN DIRECTOR MAHATMA GANDHI YOGA INSTITUTE MADURAI
7.	WEBINAR	DAY6- LIMIT IN FIVE ACTIVITIES, THE MIND WANTS TO KNOW THE MIND	26-06-20	ONLINE MODE, ZOOM & YOUTUBE	200	DR. P. VENKUMAR PROFESSOR, KARE DR. P. ARJUNAN. PSYCHOTHERAPY AND COUNSELING ANNAI HOSPITAL, RAJAPALAYAM
8.	SURVEY	DRUG ABUSE	26-06-20	ONLINE MODE, GOOGLE FORMS	100	-
9.	WEBINAR	INTERNATIONAL DAY AGAINST DRUG ABUSE AND ILLICIT TRAFFICKING - 2020	26-06-20	ONLINE MODE, GOOGLE MEET	110	DR.A.VENKADESH BABU I.R.S ASSISTANT COMMISSIONER OF CUSTOMS. DR.C.SAMUEL CHELLIAH - REGIONAL DIRECTOR REGIONAL DIRECTORATE OF NSS MINISTRY OF YOUTH AFFAIRS AND SPORT GOVERNMENT.OF INDIA, CHENNAI-600006
10.	WEBINAR	INTERNATIONAL DAY AGAINST DRUG ABUSE AND ILLICIT TRAFFICKING	26-06-20 TO 30-06-20	ONLINE MODE	110	-
11.	WEBINAR	THE IMPACT OF OVER POPULATION ON WILD LIFE	11-07-20	ONLINE MODE, YOUTUBE	15	-
12.	WEBINAR	GOING ORGANIC – WHAT DOES IT TAKE?	12-07-20	ONLINE MODE, GOOGLE MEET	250	A.K YADHAV, ADVISOR, MINISTRY OF AGRICULTURE, GOVERNMENT OF INDIA
13.	WEBINAR	SWACHHTA ACTION PLAN – LIQUID & SOLID WASTE MANAGEMENT	24-07-20	ONLINE MODE, GOOGLE MEET	90	PROF. DR. N. PANCHANATHAM VICE-CHANCELLOR

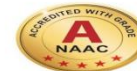


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						TAMIL NADU TEACHERS EDUCATION UNIVERSITY
14.	AWARENESS RALLY	"HOW TO PREVENT US FROM CORONA VIRUS"	07-08-20	ACS CAMPUS	20	VICE PRINCIPAL, DR. V. RAJALAXMI
15.	WEBINAR	YOUTH ENGAGEMENT FOR GLOBAL ACTION	12-08-20	ONLINE MODE, GOOGLE MEET	90	ADDRESS: MS. SHOKO NODA, UNDP RESIDENT REPRESENTATIVE. KEY NOTE ADDRESS: MS. YASMIN ALI HAQUE, UNICEF REPRESENTATIVE AND UN RESIDENT
16.	COMPETITION	WORK ORGAN DONATION DAY QUIZ	13-08-20	ONLINE MODE, GOOGLE FORMS	250	-
17.	WEBINAR	YOGA AND ENVIRONMENTAL WELLNESS FOR PERSON WITH DISABLE (3 DAYS)	10-08-20 TO 12-08-20	ONLINE MODE, GOOGLE MEET	250	GURUMAHAN UNIVERSAL PEACE FOUNDATION THIRUMOORTHYHILLS,UDUMALPET. DR.T. RADHAKRISHNAN. PH.D, (FORMER REGISTRAR) ASSOCIATE PROFESSOR, DEPARTMENT OF PHYSICAL EDUCATION, BHARATHIAR UNIVERSITY, COIMBATORE. DR. YALINI, M.B.B.S., MEDICAL PRACTITIONER, SINGAPORE.
18.	AWARENESS PLEDGE	SAFETY PRECAUTIONS DURING CORONA AMONG PROFESSIONALS AND STUDENTS.	21-08-20	SEMINAR HALL, FACULTY OF PHYSIOTHERAPY	60	-
19.	WEBINAR	CUTTING EDGE HANDLOOM ADAPTATION FOR THE NEXT GEN	05-09-20	ONLINE MODE, ZOOM MEETING	150	HANDLOOM COUNCIL OF WOMEN'S INDIAN CHAMBER OF COMMERCE AND INDUSTRY (WICCI)
20.	WEBINAR	TO BRIDGE THE DIGITAL DIVIDE TO BUILD DIGITAL INDIA"	12-09-20	ONLINE MODE, GOOGLE MEET, YOUTUBE	50	PROF. SAMUEL JOHNSON.K AP SCHOOL OF BUSINESS ANDRAPRADESH, INDIA
21.	WEBINAR	IDENTIFYING INTELLECTUAL PROPERTY COMPONENT AT THE EARLY STAGE OF INNOVATION	19-11-20	ONLINE MODE, GOOGLE MEET	98	MR. D.THİYAGARAJA GUPTHA,M.TECH,DEPUTY CONTROLLER, IPR, KOLKATA
22.	WEBINAR	SWAMI VIVEKANANDA – NATIONAL YOUTH DAY	12-01-20	ONLINE MODE, GOOGLE MEET	70	ENGLISH: DR.JUDY GRACE ANDREWS ASSOCIATE PROFESSOR SMT. SURAJBHA



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		CELEBRATIONS				COLLEGE OF EDUCATION, MUMBAI
23.	WEBINAR	NATIONAL WEBINAR ON LEGAL AWARENESS PROTECTION FROM VIOLENCE & ABUSE AGAINST CHILDREN	09-01-20	ONLINE MODE, YOUTUBE	200	MS. ROSY TABA MEMBER NCPCR GOVT. OF INDIA. MS. NIHARIKA RAI IAS SECRETARY (WCD & EDU.)GOVT. OF ARUNACHAL PRADESH MS. SONIA SINGH IPS IGP (HUMAN RIGHTS) NAGALAND POLICE DR. RAJENDER DHAR ADVISOR MINISTRY OF LABOUR,GOVT. OF INDIA