Physical Rehabilitation

10

Ingrid Parry

Introduction

Rehabilitation after burn injury requires teamwork, communication and collaboration to maximize a patient's physical and psychological recovery. Advances in medical and surgical care have resulted in unprecedented rates of survival and patients withstanding more extensive burn injuries than ever before [1]. Patients with larger and more severe burn injuries have more scarring and therefore greater rehabilitation needs. Survival itself is no longer considered the end point of care, but rather the *quality* of a patient's survival is emphasized through rehabilitation efforts [2]. The overall goal of physical rehabilitation after a burn injury is to assist the patient in achieving the highest possible level of functional independence and maximal rehabilitation.

Physical rehabilitation begins on the day of admission and continues through scar maturation. For burn survivors with very severe injury, rehabilitation may continue for years due to ongoing reconstructive surgery and subsequent therapy-related needs, especially in growing children. Burn rehabilitation is typically provided by occupational and physical therapists (OT/PT) with special training in burn care. Although OTs and PTs have different professional training, the two disciplines work closely together in burn care and may overlap in their approaches to achieve distinct rehabilitation goals. For the purposes of this chapter, OTs and PTs will be referred to together as "burn therapists."

I. Parry, M.S., P.T. (✉)
Department of Physical and Occupational Therapy, Shriners Hospital for Children, 2425 Stockton Blvd., Sacramento, CA 95608, USA
e-mail: iparry@parrypt.com

Rehabilitation Phases of Recovery

Although rehabilitation is a continuum of care provided throughout recovery from burn injury, the focus and emphasis of therapy shifts and can be described in three phases: acute rehabilitation, intermediate rehabilitation, and long-term rehabilitation [3]. The emergent care needs of the patient are extensive early in the recovery process and diminish over time, while the rehabilitative priorities and therapy needs gradually increase with time until maximal rehabilitation is achieved. It is helpful to understand the patient's rehabilitation needs in relationship to wound healing, surgery, and hospitalization.

Early Rehabilitation Phase

The early rehabilitation phase starts upon admission and continues until the patient's wounds are 50 % closed or skin grafting for wound closure has begun

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[2]. Typically, burn therapists evaluate the patient within 24 h of admission and establish a rehabilitative plan of care. Early rehabilitation corresponds to the inflammatory phase of wound healing and the early proliferative phase when active wound contraction is occurring. Wound contraction, inflammation, and pain often restrict a patient's range of motion (ROM) and functional abilities during this phase. Therefore, the focus of therapy is to maintain ROM while promoting wound healing. "Appropriate therapy should not obstruct wound healing and would healing should not be allowed to prohibit rehabilitation" [4]. It is essential that the burn team coordinate their efforts to facilitate wound healing while preventing loss of function. Therapeutic interventions during this stage include wound care, edema management, anti-deformity positioning, splinting, ROM exercises, basic functional activities, and early ambulation.

Intermediate Rehabilitation Phase

The intermediate rehabilitation phase occurs until wound closure and/or acute skin grafting is complete [2]. This phase corresponds with the proliferative phase of wound healing when the tissue is re-vascularizing and re-epithelializing. Fibroblast are actively producing collagen, elastin, and glycosaminoglycans for the rebuilding and strengthening of scar tissue. The emphasis of rehabilitation in this phase is on maintaining ROM and restoring function as collagen is laid down in the wound while also avoiding mechanical trauma to newly healed tissue. Therapeutic interventions during this phase typically include the continuation of anti-deformity positioning, progression of splints to maintain ROM, ROM exercises, functional mobility, activities of daily living (ADLs), ambulation training, strengthening, early scar management, and initiation of basic cardiovascular/endurance training.

Long-Term Rehabilitation Phase

The long-term rehabilitation phase begins at wound closure until such time that the patient has received maximal benefit from rehabilitation services [2]. The patient may receive therapy within the acute hospital setting, a long-term rehabilitation facility, an outpatient therapy setting, or a continuum of all of these settings during this phase of care. Long-term rehabilitation corresponds with the maturation (or remodeling) phase of wound healing when the closed wound is developing strength, and collagen is being actively deposited and degraded. Therapeutic interventions during this phase emphasize minimizing scar contraction and hypertrophy and their impact on functional recovery. Common therapeutic interventions include anti-deformity positioning and splinting during times of inactivity or sleep, a progression of more complex and individually relevant functional tasks, physical agents/modalities, progression of functional mobility and ADLs, advanced ambulation activities, continued ROM and strengthening exercises, more demanding cardiovascular/endurance activities, sports and wellness activities, and scar management. During this phase, the interventions are transitioned to the patient and caregiver for eventual independence and compliance in their home setting.

Components of Rehabilitation

Positioning

Positioning is a fundamental part of any burn rehabilitation plan of care and the first line of defense against the formation of contractures. In the early rehabilitative phase of recovery, positioning is also important for the reduction of acute onset burn edema and protection of vulnerable tissues (i.e. exposed tendons, tissue over bony landmarks, skin grafts). An individualized positioning program is developed within 24 h of admission for each patient based on the distribution of the burn injury with consideration for associated injuries. The primary goal of a positioning program for the patient with burn injury is to maintain healing tissue in an elongated and anti-deformity position while protecting vulnerable structures. The involved body segment is placed in a position opposite the potential contracture based on wound distribution. For example, if the anterior hip crease or surrounding skin on the ventral surface

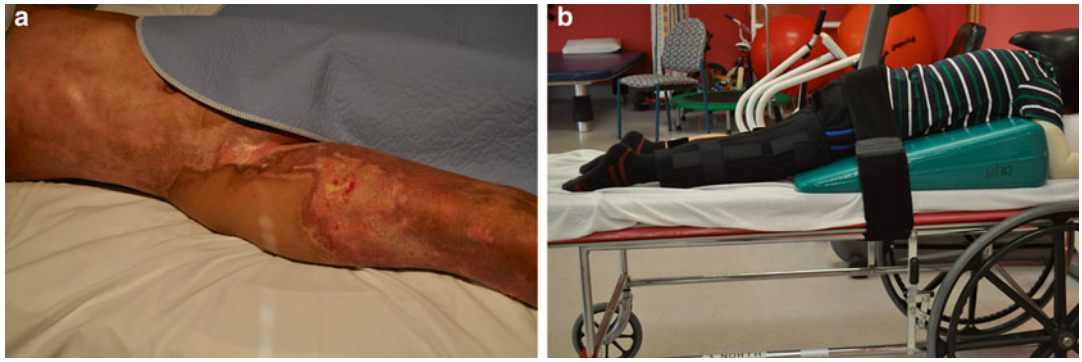

Fig. 10.1 (**a**) Distribution of burn injury. (**b**) Anti-contracture position

of the thigh and trunk is burned, then the anti-deformity position for that body segment would be full hip extension which can be achieved with a prone position (see Fig. 10.1a, b).

Patients tend to guard with pain after burn injury and assume a fetal like position with flexion of the extremities. It is well-known in burn care that the position of comfort is the position of deformity and standard anti-contracture burn positions have been defined [5]. Positions of function, however, are also important to consider and should be incorporated into any comprehensive positioning program. For example, the recommended position for a circumferential upper extremity burn that crosses the shoulder, elbow, and wrist joints is lying supine with the shoulder abducted and slightly horizontally flexed, elbow extended, and wrist supported in neutral. However, time in this position should be balanced with a position that encourages functional use of the upper extremities such as side-lying with the arms toward midline and the elbows flexed (functional position for feeding), (see Fig. 10.2a, b). There is currently no defined duration for a positioning schedule, so the best guide to determine how long any given position is beneficial is careful assessment of changes in the patient's ROM throughout the course of recovery.

Desired positions may be achieved and maintained with a variety of devices such as pillows, gel cushions, foam blocks, slings, bed modifications, and splinting devices. When possible, the patient should not be left supine in bed but should assume a combination of positions throughout the day including side lying, prone, sit, or stand in an effort to modify whole body positions and promote functional independence.

Splinting/Casting

Splinting is used in burn rehabilitation to protect vulnerable structures, minimize deformity, and maintain or increase tissue length of forming scar. Splints are used in situations where anti-deformity positioning alone does not sufficiently maintain ROM or when rapid loss of motion is anticipated. Although the use of splinting devices varies among burn centers [6–9], it is an accepted therapeutic treatment most often used in conjunction with active exercises and functional activities. Some burn centers prioritize mobility and only use splints when a loss in ROM is noted [10], while other centers use splinting more readily for immobilization and tissue elongation [11]. In 2011, Hollavanahalli et al. reported on the current trends regarding splinting in burn rehabilitation and found that therapists are using splinting more often to correct contractures than to prevent contracture [9]. That is, burn therapists tend to refrain from splinting joints that have full ROM, and instead, wait until there is a loss of motion observed before they splint, even with deep partial thickness and full thickness burns. Common splint-wearing schedules prescribed for the patient with burns are "2 hours on and 2 hours off" or "nights and naps in splints and active movement and function during daytime."

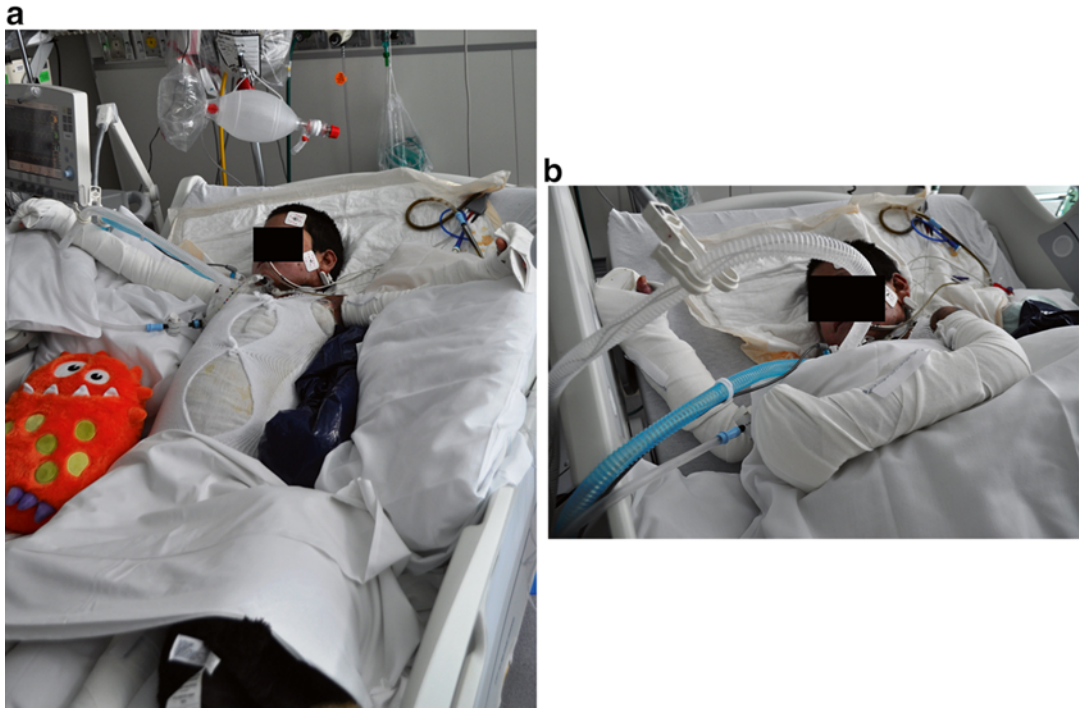

Fig. 10.2 (**a**) Standard anti-contracture position for upper extremity burns. (**b**) Functional positioning for upper extremity burns

The balance of time between wearing splints and removing splints for movement is typically dependent on the progress of the patient and is often determined by his/her ability to maintain ROM and functional independence during period when splints are not worn.

Despite a paucity of evidence on the effectiveness of splinting [12], the principles behind splinting are well-supported. Over 134 different splint designs have been described, likely a result of burn therapists' creativity to solve the many individualized problems that arise for patients with burn injury [13]. The actual splint type that is applied is less important than the limb position itself. Splints provide low load, prolonged duration forces intended to maintain elongation in scar and surrounding tissue [14]. Following the guidelines described for positioning, the forces of a splint should be applied in the opposite direction of the potential contracture.

Splints can be categorized according to the objective they are designed to achieve. Static splints aim to immobilize an area and therefore have no mobile parts. This type of splint may be used to protect tissue integrity, maintain joint alignment, provide opposing forces to forming scar contractures, or to maintain passive ROM [15]. Static splints are often used post-operatively over new skin grafts for immobility of the joint and protection of the graft. A static splint may also be made of immobile, but adjustable components, so that it can be remodeled to accommodate increases in ROM, in which case it is called a static progressive splint. In contrast, dynamic splints aim to mobilize a body part by utilizing the concept of tissue creep. That is, elastic parts are used to apply constant forces to forming scar tissue, thus progressively elongating the tissue over time [16]. Dynamic splints are used to provide prolonged stretch to tight tissue, apply controlled resistance for strengthening, or assist movement in weak muscles [15].

Serial casting, using plaster or fiberglass material, aids in tissue elongation and correction of burn scar contracture to areas non-responsive to other therapeutic interventions [17]. A cast is

Fig. 10.3 A serial cast with a cut out for access to wound

applied circumferentially with evenly distributed pressure over the scars and positions the joint such that low load, prolonged corrective forces can be applied with minimal pain [18]. Casts are most often used with noncompliant patients or in children to prevent removal of the device. Casts may be safely used over non-infected skin grafts or open wounds [19]. They are typically applied and changed every 3–5 days when open wounds are present and every 7–10 days over healed scars. Windows may be cut in the cast to allow access to wounds if appropriate and necessary (see Fig. 10.3). Serial casting is a therapeutic option that has benefits to the patient with burn scar contracture when applied with skill and careful monitoring.

Range of Motion and Functional Exercises

Movement of burned areas after injury can be painful and result in muscle guarding and loss of motion. Exercise programs begin on the day of admission and continue throughout wound healing and scar maturation. ROM exercises can be active, active-assisted, or passive. Active exercise, where a patient independently moves a limb segment, is preferred in most situations because it provides sense of control, decreases perceived pain, and encourages active muscle contraction. Furthermore, active muscle pump reduces edema, promotes circulation [20], and mitigates muscle atrophy [21]. If a patient cannot achieve full ROM actively, then active-assisted exercises are used to manually assist the patient in moving through the segment of motion they cannot perform independently. With active-assisted ROM, patient may still receive the benefits of active exercises without compromising full available passive motion. Passive ROM is normally reserved for patients who are unable to participate in active motion either due to sedation, neuropathy, critical illness or other barriers. Passive ROM is applied in a slow, controlled manner, while caution is taken to monitor the local skin/tissue response and overall patient tolerance of the exercises.

Functional exercises are purposeful tasks that help to reinforce the ROM achieved while improving strength, endurance, and coordination. For example, feeding one's self with a utensil encourages grasp (hand ROM and strength) and elbow flexion and extension ROM, strength, and endurance while training coordination for an activity needed in daily life. The ultimate goal of OT/PT after a burn injury is to return the patient

to the pre-burn level of functional independence. In the very early phases of burn recovery, functional tasks are tasks related to self-care, feeding, and mobility, while in the later stages functional tasks involve skills related to work, school, family roles, or play/recreation in preparation for a patient returning home and to the community.

Bed mobility, transfers in and out of bed, as well as ambulation are all forms of functional tasks that require full body movement and are some of the initial skills trained after injury. As the patient is able, he/she begins to practice activities of daily living, such as self-hygiene and toileting. Focusing on ROM through functional tasks such as these, not only encourages maintenance of motion, strength, and muscular endurance, but allows the patient an opportunity for independence which often improves morale and confidence during the recovery process. In the long-term rehabilitation phase, higher level functional tasks such as advanced mobility skills (i.e. climbing stairs, floor transfers) or personal role tasks (i.e. cooking, work hardening) are emphasized.

Although the burn therapist is primarily responsible for implementing exercise programs and training patients toward independence with functional tasks, all team members are responsible for reinforcing independent movement whenever possible. For example, while in the intensive care unit (ICU), the nurse can encourage the patient to independently roll when placing a bed pan for toileting or during follow-up clinic visits, the surgeon can request the patient to demonstrate a functional task that he/she has mastered since the last visit.

Ambulation

Protocols for ambulation after burn injury and after skin graft surgery vary among burn centers. Research on early ambulation of critically ill patients demonstrates benefits such as fewer ventilator days [22], decreased pain [23], and decreased length of stay [24]. Early mobilization of critically ill patients has been shown to be both feasible and safe [25]. Upright mobility protocols

Fig. 10.4 Early ambulation in the ICU with a burn patient

in the burn ICU may begin with supported sitting in bed or a chair and gradual progression to standing and assisted ambulation. Equipment such as a cardiac chair and tilt table [26] may be helpful in facilitating more time in an upright position, while walkers or other assistive gait devices may enable longer ambulation distance (see Fig. 10.4). Adequate personnel and appropriate equipment is essential for keeping the patient and staff members safe when mobilizing large patients or patients on ventilators.

Early ambulation may be limited by the burn patient's need for surgery, in particular skin grafts. The majority of burn centers mobilize patients out of bed between post-operative day (POD) 2 and 5 after skin graft surgery to the legs and between POD 1 and 4 for skin grafts above the waist [9]. A recent prospective randomized controlled trial compared early ambulation (POD 1) to standard time to ambulate (POD 5) and found that there was no difference in graft loss between the groups and that the early ambulation group ambulated significantly more minutes per therapy session than the standard group [27].

A patient's ability to ambulate may initially be limited by edema, pain, decreased ROM, diminished strength, or fear and anxiety. Using elastic bandages wrapped in a figure-eight pattern on the lower legs provides vascular supports to new skin grafts and helps with pain. Using preparatory exercises such as isometric and concentric exercises in a variety of positions helps allay fear or anxiety about movement. As the patient gains independence with ambulation, higher level whole body balance and coordination activities should be incorporated into the therapy regimen according to the patient's pre-burn level of function and prior home, work, or recreational demands. As ambulation progresses, the focus on independent upright mobility shifts to one of increasing cardiovascular and endurance activity demands.

Strength and Conditioning Exercises

Patients with significant burn injury experience loss of lean muscle mass [28], decreased bone density [29], and fatigue [30]. When compared to non-burned children and adults, burn survivors show decreased aerobic capacity [31], strength [32, 33], and are generally deconditioned. Two factors contribute to this deconditioning following significant burn injury: (1) prolonged bedrest due to medical instability and need for multiple surgeries [34], and (2) prolonged hypermetabolic response which leads to muscle catabolism and atrophy [35].

Strength and conditioning activities are aimed to improve the ability of a burn patient to participate in daily/work-related/recreational activities for prolonged periods of time without fatigue [4] and are normally a major component of therapy in the long-term rehabilitation phase of recovery. Exercise programs that include strength and conditioning activities have been shown to reverse the effects of protein catabolism and immobilization after burns in both adults and children [36, 37]. Recent practice guidelines on exercise after burn injury recommend that strength and cardiovascular endurance be evaluated in individuals 7 years of age or older and a supervised resistance and/or aerobic exercise program implemented for those individuals testing below normal [38]. Strengthening may begin with active ROM or functional activities described previously, then progress to exercises that require greater muscular resistance and more cardiovascular demand. A variety of protocols exist for strength and endurance [39] training and may be initiated as early as immediately post-discharge to as late as 14 years post-burn. Exercise programs have shown benefit when implemented for 6–12 weeks in adults and up to 12 weeks for children [38].

Scar Management

Comprehensive scar management includes efforts to minimize scar contracture as well as scar hypertrophy. The previously described therapeutic interventions (i.e. positioning, splinting, exercise, etc.) are all aimed to mitigate contracture by providing elongation forces to the scar tissue that forms during dermal healing. This section will describe some of the non-surgical interventions that focus on reducing or preventing scar hypertrophy as well. Scar hypertrophy is an excess deposition of collagen resulting in an overgrowth of scar tissue.

Nonsurgical therapies to minimize scar hypertrophy aim to alter the mechanical or physical properties of the scar [40]. The most common interventions used clinically include massage, compression therapy, and insert/silicone application. Initiation of these interventions is determined based on assessment of the strength and integrity of the scar and may occur between 2 and 6 weeks after epithelialization or skin graft surgery. There is evidence that early intervention may have a greater influence on scar outcome [41, 42]. Duration of the intervention is based on scar maturation, which typically takes 12–18 months but may vary based on the individual. Scars progress from an immature state which is characterized by a red and raised appearance and rigid feel to a state of maturity which is characterized by a relatively paler color, planar disposition, and pliable feel. Clinically, scars are observed to thicken and rise the most at approximately 3–4 months after burn wound closure.

Massage and Moisturizing

Due to the imbalance in skin hydration, moisturizers play a key role in the early management of scars to hydrate the newly healed tissue, support damaged sebaceous gland function, and to mitigate the pruritic effect of dry skin [43]. Once burn scars have matured enough to tolerate sheering forces, scar massage using a moisturizing cream should be incorporated into the scar management regimen. A variety of techniques have been described and utilize principles of mobilizing scar tissue to reduce adhesions and improve pliability or friction to realign collagen fibers [44]. Scar massage has shown to benefit ROM and reduce itch, pain, and anxiety in burn patients [45–47]. Despite the lack of evidence for changes in physical scar characteristics, scar massage is still routinely used clinically in burn rehabilitation [9, 48].

Compression Therapy

The use of compression to control burn scar hypertrophy has a long history [49]. Despite conflicting evidence of the effectiveness of compression therapy [50], pressure garments and other compression devices are widely used in burn rehabilitation (see Fig. 10.5). A recent randomized within-wound comparison concluded that pressure garment therapy is effective, but that the clinical benefit is restricted to patients with moderate or severe scarring [51]. Patients with burn wounds that heal within 7–14 days (superficial partial thickness burn wounds) do not need compression therapy [51]. Those patients whose wounds heal within 14–21 days or require skin grafting are closely monitored and pressure garments are typically prescribed preventively [52, 53].

The appropriate amount of pressure to be applied to hypertrophic scar has not yet been determined [50]. Clinically, custom therapeutic pressure devices used for mitigation or prevention of scar hypertrophy average 24–40 mmHg of pressure, which is approximately equal to or greater than the capillary pressure (25 mmHg) [54]. Pressure garments are used throughout scar maturation and have been shown to have a positive effect on scar thickness when used for a minimum of 6 months [55]. Pressure garments are typically prescribed to be worn 23 out of 24 hours per day and should only be removed for bathing or during exercises if they interfere with movement. The garments should be replaced when the fabric is worn out or they no longer fit the patient (more frequently with growing children).

Fig. 10.5 Custom-fabricated pressure garment

Custom fit pressure garments can be costly and unavailable to all patients, in which case, other forms of pressure may be used if pressure is indicated. Alternative compression devices include elastic bandages, self-adherent stretch wrap, tubular compression bandages, or pre-fabricated compression garments.

Insert and Silicone Application

The human body has many areas of depression where continuous pressure with garments is difficult to achieve. Therefore, various insert materials are used to "fill the space" and create conformity

Fig. 10.6 Foam insert used in web spaces and silicone sheet applied to dorsum of foot

and compression in those areas of concavity such as the axilla, sternum, palm, web spaces of the finger/toes, and areas on the neck and face (see Fig. 10.6). Common insert materials used are foam, elastomer, putties, neoprene, or silicone sheets [18, 56]. The inserts may be placed directly on the scar or within a pocket in the garment.

Silicone gel sheets may function as an insert to improve continuous pressure, or according to some studies, the silicone material itself may benefit the scars [57–59]. Silicone gels or gel sheets have been recommended for use on scars that have a high probability of becoming hypertrophic [60, 61]. The exact mechanism of how silicone affects the burn scar is still not known, but some theories include hydration of the stratum corneum which facilitates regulation of fibroblast production, protection of scar tissue from bacteria-induced excessive collagen production, or modulation of growth factors [62]. Clinically, silicone has been observed to hydrate the burn scar, depress the height of hypertrophic scars, increase the pliability of scars, and improve pain and itch [63, 64]. Care should be taken when using inserts or silicone gel or gel sheets to clean the products regularly and monitor the skin for allergic reaction or maceration.

Scar Assessment

Evaluating scar characteristics is an important part of monitoring clinical progress throughout scar maturation and valuable in research for studying the effectiveness of interventions. A variety of subjective and objective tools exist to evaluate scars [65]. Subjective tools allow the clinician to systematically rate various aspects of the scar such as pliability, pigmentation, vascularity, and height and include additional patient self-rating of pain, itch, and satisfaction. Such scales are easy to administer and clinically feasible, but are subject to observer bias and have indeterminate or low-quality clinimetrics [66]. Commonly used subjective scar scales are the Vancouver Burn Scar Scale (VBSS), various modified versions of the VBSS, and the Patient Observer Scar Assessment Scale (POSAS) [67–69].

Objective scar tools provide a more objective and reliable evaluation with better reproducibility and inter-rater reliability than do subjective scales [70]. However, they measure only one aspect of the scar and are often not as feasible for clinical practice. Multiple objective scar tools are available including the cutometer (pliability), durometer (firmness), Chromameter or mexameter (color), ultrasound (thickness), and laser Doppler (perfusion) to name a few [65, 71].

Outcome Measures

Just as scar outcome is valuable to measure, so is functional outcome. A wide variety of outcome measures are used clinically in burn rehabilitation and for research. Using the World Health Organization International Classification of Functioning, Disability and Health, a few common outcome measures used after burn injury can be described [72]. Impairment (body functions and structures) outcome measurements commonly used for evaluation after burn injury include ROM (goniometry) and [73] strength (manual muscle testing or dynamometry) [74] and cardiovascular function (modified Bruce protocol) [39]. Activity limitations can be determined from functional ability such as hand function (Michigan Hand Outcomes Questionnaire) [75] and mobility (6 min walk test) [76]. Participation limitations are evaluated by a patient's ability to return to work or school [77, 78]. There are also many outcome measures used to evaluate the impact of burn injury on overall quality of life outcome [79, 80]. A recent consensus symposium on quality outcome indicators proposed that the following metrics be used to measure functional outcomes after burn injury: Burn Specific Health Scale-Brief (BSHS-B) (adults) and Health Outcomes Burn Questionnaires (children) [81].

Special Considerations for Rehabilitation

Specialized Areas of Treatment

Hands

Hands are one of the most common areas to sustain burn injury. Due to the complex anatomical and functional nature of the hands, a burn injury of any depth to this body part is considered significant and presents unique challenges to the burn therapist. Anticipated problems with the burned hand include edema formation, a multitude of possible hand deformities and functional problems, difficult scar management, and in children, impaired fine motor development. The burn therapist must diligently attend to early evaluation and treatment of hand burns. Special attention should be given to monitoring proper positioning and splinting to avoid disabling contracture formation. If contracture forms, it is essential to differentiate the involved structures and provide prompt and appropriate intervention. Additional considerations for therapy of the hands include early assessment of nerve injury, hand-specific functional training, maintenance of ROM and web spaces, and appropriate referrals for follow-up care.

Face

Due to the unique esthetic and functional nature of the face, it too presents unique challenges to the burn therapist when scarred. With facial burn injury, there is a high propensity to form contractures of the mouth (microstomia) and eyelids (ectropion), which can have a significant functional and cosmetic impact for the patient. The therapeutic interventions described previously (ROM exercises, splinting, massage, compression therapy, and silicone) are commonly used on the face, but consideration must be given to fragile facial features and complex anatomical curvatures. Compression therapy of the face is often provided with a clear, hard plastic material (transparent face mask) in order to provide continuous contact to facial curvatures and allow the patient to be seen through the material for more normal social interactions [82, 83].

Age-Related Rehabilitation Considerations

Children and the elderly require special consideration when rehabilitating from a burn injury. Children tend to have increased anxiety and a decreased attention span. They are a developing being physically and emotionally, which results in the need for the burn therapist to be adaptable, creative, and flexible. The child's decreased understanding of the benefits of therapy may lead to decreased compliance and the therapist must work closely with family members to ensure follow-up with the plan of care. In addition, frequent growth spurts may require ongoing modification

of pressure garments or splints. Functional goals with the pediatric burn patient are directed at age appropriate play and school activities.

Elderly adults who sustain burn injury may have premorbid limitations in sensory (eye sight, hearing, skin sensation), motor (ambulation, balance, coordination), or cognitive (memory, judgement) abilities and will require special adaptations or assistance during rehabilitation to learn follow-up care. Skin function in the elderly may also be altered, resulting in delayed wound healing, susceptibility to infection, increased risk of pressure sores, and compromised thermoregulation [84]. Caution should be used with transfers to avoid shearing forces on the skin. Physiological response to therapy should be monitored closely in case of comorbidities affecting the heart, lungs, or circulation. Discharge planning may involve a return to a different living situation, in which case caregivers must be identified and trained.

Conclusions

Rehabilitation services are a critical part in recovery from burn injury and play a significant role in the restoration of a patient's physical function. Physical and occupational therapy should be prescribed on the day of admission and continue throughout acute hospitalization, long-term rehabilitation, outpatient, and follow-up care. Therapy must be implemented early and provided continuously throughout the stages of recovery for maximal benefit. The burn therapist is an integral part of the team and essential in facilitating the patient's physical rehabilitation.

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