Orthosis for a War Veteran With Complete Median and Radial Nerve Injuries.

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This article describes an innovative dynamic modular orthosis for a Gulf War veteran who sustained complete median and radial nerve injuries at the elbow from a fragment wound. This orthosis utilized the intact ulnar muscles to power a three-jaw chuck grip. The orthosis incorporated a hinged wrist with an elastic wrist extension assist. A coupler mechanism functionally joined the second and third fingers and allowed third finger metacarpophalangeal joint flexion to provide grasping force for both digits. A removable thumb sleeve with an elastic abduction assist stabilized the thumb interphalangeal joint allowing the ulnar innervated adductor pollicis to oppose during grasp. This orthosis was successfully incorporated into the patient’s daily activities and utilized extensively at one year follow-up. To our knowledge, the optimal orthotic for this situation has not been previously described. The design, fabrication, and biomechanical principles of this orthotic are presented along with a literature review. We conclude that this orthotic can improve the function of a patient with complete median and radial nerve injuries.


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Occupational therapists are frequently involved in the decision making process of seating system equipment prescriptions for the wheelchair-dependent individual. It is known that sitting posture affects the location and distribution of tissue pressure gradients. Most therapists utilize visual observation of a patient’s posture and repeated skin inspection to detect appropriate equipment to facilitate proper trunk stability and tissue pressure distribution. There are a number of clinical tools developed to measure interface pressure. A new computerized tool, the Force Sensory Array (FSA), has become available to provide pressure measurements. It is innovative in that it produces two- and three-dimensional visualization of pressure and its distribution. These devices enable the therapist to objectively select the most appropriate seating system for patients. These objective data, in conjunction with clinical observations, result in a more effective support surface for persons who are wheelchair dependent. This report will illustrate in photographs and graphic results the use of computer-assisted technology in the decision making process of a seating system prescription for a spinal injured individual. The results obtained from this technology can be an effective adjunct in justifying to third-party payers how clinical decisions are made in equipment prescriptions.

Prosthetic Management of Patients With End-Stage Renal Failure.

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Six diabetic patients, three women and three men, with end-stage renal failure (ESRF) on maintenance hemodialysis received inpatient rehabilitation and prosthetic fitting following lower extremity amputation. Three patients had bilateral below-knee amputations (BKA) and three had unilateral BKA, requiring nine prostheses to be made. With each fittng, the type of liner, socket, prosthetic frame, and foot selected was determined by the patient’s anticipated activity level. At conclusion, there were five gel liners and four Pe-Lite liners. Eight freely connected patella tendon bearing sockets, and one volume-adjusted socket were used. Six exoskeletal and three endoskeletal frames were selected, depending on the needs of durability or cosmesis. Five Geriatric Light Weight SACH, three SAFE, and one Seattle Foot were selected, depending on the patient’s activity level and terrain needed. Prosthetic suspension was via a neoprene sleeve for six prostheses, two by a waist belt with suspension cuff, and a thigh corset with lacer in one patient. Volume fluctuations of the stump associated with dialysis were compensated for by adjusting the number of sock layers worn. By selecting proper equipment and following appropriate guidelines, the rehabilitation of ESRF patients with lower extremity amputations can be successful and rewarding.

Psychology

Inpatient Rehabilitation: Relationship Between Patient Satisfaction and Functional Gains.

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Patient satisfaction is one measure of quality assurance. All patients who had stayed at least two weeks in an acute rehabilitation unit were surveyed by telephone three months after discharge. This survey included questions regarding medical and functional status, discharge planning, and overall satisfaction such that the unit would be recommended to others in similar situations. During the inpatient stay, function was assessed on a weekly basis utilizing the Functional Independence Measure (FIM). Discharge goals were established by the team during the first week of the patient’s stay. Patients were considered to have met their goals if the discharge FIM score was not less than ten points from the predicted goal. During a two-year period, 210 patients were surveyed, of whom 204 reported overall satisfaction and six were dissatisfied. Of the 210 patients, 185 were considered to have met the discharge goal, and 25 patients did not achieve the predicted goal. Of the 185 patients obtaining the predicted goal, 182 (98%) reported being satisfied with their inpatient rehabilitation stay. Of the 25 not meeting the predicted goal, 22 (88%) were satisfied. The difference between these percentages is statistically significant (z = 8.47, p < .0001). These results indicate that overall satisfaction with an inpatient rehabilitation stay is correlated with achievement of predicted functional goal.

A Collaborative Model: A Psychotherapeutic Approach to Transition.

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This program is designed to integrate psychology and therapeutic recreation treatment in a collaborative effort for provision of group psychotherapy to children who require extensive rehabilitation. After a significant trauma or illness, a child often demonstrates difficulties in the adjustment process. Areas of concern may include attention and concentration deficits, oppositional behavior, and poor self-esteem. In addition, social skills are often a significant factor in community reentry, requiring relearning or...