

CASE STUDY: C3-C6 TSCI ASIA C, FUSION FROM C3-C6

PATIENT: 49-year-old male referred for rehabilitation for improved strength and function

MEDICAL HISTORY: The patient suffered a C3-C6 SCI during a body surfing accident while on vacation at the beach. He pitched forward riding a wave and hit his head on the sand. He also incurred ligament damage and bruising. Prior to the accident, he was totally ambulatory, active and an avid bicyclist.

FUNCTIONAL DEFICITS: The patient came to Good Shepherd from another facility. He had undergone a fusion from C3-C6 to prevent further damage. At the time, he was non-ambulatory and was experiencing shoulder pain due to subluxation caused by severe muscle weakness.

INITIAL EVALUATION:

- Dependent for all activities of daily living – feeding, bathing and dressing
- Moderate assist for bed mobility
- Moderate assist for sit-pivot transfers
- Shoulders were subluxed and painful
- Arm movement limited to shoulder shrug
- Modified independent in power wheelchair mobility
- Decreased sensation to light touch, proprioception and temperature
- Bilateral lower extremity strength was 4-/5 at hip flexors
- Bilateral hip abd/add 2+/5

MEDICAL HISTORY: The Outpatient Neurorehabilitation team developed a comprehensive physical therapy treatment plan for this patient that focused on the following:

- Transfer training
- Aquatic therapy
- Pilates-based therapy
- Gait training using the Ekso and Zero-G body weight support
- Hand therapy
- Stretching
- Nutritional services
- Nursing involvement for bowel and bladder training

RESULTS: The patient has made huge strides since initiating therapy. He now ambulates more than 1,000 feet with a rollator walker, modified independent. He ambulates with an NBQC at home for short distances. He is independent with bed mobility and transfers and no longer uses his power wheelchair. He passed the sensory organization test (SOT), MCTSIB, motor control test (MCT) and adaptation balance testing. He was able to ambulate 668 feet without AD during the 6-minute walk test (MWT) and completed the 5-meter walk test with a gait speed of .55 meters/second. His strength test in bilateral lower extremities is WFL with the exception of decreased hip abduction and hip extension bilaterally. He does need assist from a helper for early morning meal prep, feeding and upper body clothing management due to residual upper body weakness.

For more information, contact:

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