

Abstract

Background: Many persons with spinal cord injury (SCI) use manual wheelchair to ambulate and their upper body for weight-bearing activities, which will affect the upper extremity joints. The impact of cervical SCI affects the sensory and motor function in the shoulder region. Shoulder joint problems usually manifest in pain and/or disability. The cause is often multifactorial with both external and internal musculoskeletal factors contributing. Clinical practice guidelines (CPG), based on old literature, for management of shoulder impairment is used as a starting point in rehabilitation. Since there are challenges in examination and treatment, there might be a need to evaluate if the old recommendations are still applicable or if new information can be added to the management of shoulder impairment.

Aim: To explore shoulder impairment among wheelchair users with cervical SCI, based on the recent literature, in order to improve diagnostics and treatment.

Method: A literature search with a systematic approach was conducted in the databases Pubmed, CINAHL and Web of Science.

Results: Nine studies were included in the review for quality assessment and data analyzes. The results presented a list of eight domains. The main findings regarding shoulder impairment, suggested that range of motion shoulder external rotation, flexion and abduction was important to maintain and to pay attention to. Changes in posture and kinematics due to the increased load from wheelchair propulsion resulted in increased downward rotation and protraction of the shoulder. Persons with cervical SCI have higher risk of shoulder pain if they have contractures or spasticity. The result confirms that common structural deviations as AC-joint arthroses, tendinopathy and/or RC-tear and biceps tendon deviation.

Conclusion: CPG of the upper limb remains the golden standard for shoulder management. The result highlights implication for further research for shoulder impairment among persons with cervical SCI.

Keywords

Impairment, Shoulder problem, Spinal Cord Injuries, Tetraplegia, Wheelchair.