

## **The Hemiplegic Shoulder Trilogy: Pain, Subluxation and Orthosis**

Restoring functions of an individual to the highest possible level is the primary goal of every rehabilitation service. After stroke rehabilitation, recovery of the upper extremity is less than the lower extremity. Many are able to walk, but not able to use their weak or paralyzed upper extremity. Flaccid paralysis of the shoulder muscles causes shoulder subluxation and shoulder pain which prevent use of the affected upper limb and limit self-care activities. Therefore, one of the most challenging goals to achieve is recovery of the upper extremity functions.

In this issue, there are two interesting articles about shoulder problems. One is a systematic review on management of shoulder pain in patients with stroke and the other is a clinical trial comparing the effect of a newly designed custom-made shoulder subluxation orthosis and a commercial Bobath sling commonly prescribed for patients with shoulder subluxation.

The systematic review shows the use of supportive devices/slings for shoulder subluxation has only moderate

evidence and is moderately recommended. A strong recommendation needs not only a good randomized control trial but also a more effective and appropriate shoulder orthosis. The commercial sling may be easily accessible but not effective enough to reduce the occurrence of shoulder subluxation. Perhaps, the custom-made orthosis presented in the other article would be a good alternative shoulder subluxation orthosis; it is relatively low cost and could be made by occupational therapists. However, this new shoulder subluxation orthosis may not help control shoulder pain as the participants recruited in the study had rather low pain intensity. Therefore, future study should consider not only its effect on shoulder subluxation but also shoulder pain and functional recovery of the upper limbs. This could be the potential solution to facilitating upper limbs recovery in people with stroke in the future.

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