

Current state of surgical interventions to optimize upper limb function in tetraplegia

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LEARNING OBJECTIVES

- Insight in patient selection, surgical and rehabilitation intervention for spasticity correcting surgery.
- Insight in patient selection, surgical and rehabilitation intervention to restore hand function in various cervical level of injuries.
- Understanding outcome and patient value of upper limb reconstruction in tetraplegia.

The opportunities to improve upper limb function after spinal cord injury, and thereby patient's independence and quality of life, is continuously evolving. This workshop aims to provide an overview of surgical interventions to optimize upper limb function in the tetraplegic population available today. It will cover aspects such as patient selection and preparation, surgery and rehabilitation strategies, and outcome and consumer perspective. Current treatment strategies will be discussed in a multidisciplinary setting together with specialized surgeons and therapists.

Individualized assessment and clinical decision making are keys to provide the best possible care for the patient with spasticity. Herein, we present a treatment algorithm for surgical interventions to spasticity and present outcome after such interventions. The second part include the broader picture of reconstructive surgery, from C5 to C8, including both tendon and nerve transfers to restore maximum grip and grasp function. The Combined Nerve and Tendon Transfer (CNaTT) concept has over the recent years developed into our preferred method. Ongoing research related to the concept and our experiences from the intervention will be discussed. The workshop provides an up-to-date discussion of important clinical aspects related to upper limb reconstruction for everyone practicing the field of spinal cord injuries.

A. Spasticity correcting surgery

Spasticity correction surgery – who, when and how? *Berg J*, Hand surgeon
 Rehabilitation strategies and outcome *Ramström T*, OT
 Discussion on the implication of surgery for spasticity

B. Key concept of combined nerve and tendon transfer

New opportunities for upper limb reconstruction from C5 to C8, including both nerve and tendon transfers. *Berg J*, Hand surgeon
 Rehabilitation and Outcome *Wangdell J*, OT

C. A patient perspective on the nerve-tendon intervention and it's outcome

Merin A-K, former patient

D. Discussion