

Challenges In Managing Severe Spasticity In Patient With Acute Cervical Spinal Cord Injury: Is Dynamic Splint- An Option?

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INTRODUCTION:

Spinal cord injury (SCI) is a dreaded injury that has many sequelae. Spasticity is one of the most common complications for SCI patients that can potentially cause deformity and areas of pressure sores¹. Managing very severe spasticity is very challenging in real practice.

REPORT:

A 48-years-old gentleman sustained alleged fall from a 2 metre height in workplace with neck in hyperflexion. Subsequently, he developed weakness in all four limbs and numbness from his shoulder downwards. MRI revealed cord edema worst at the level of C4 (Fig 1). His neurology was C4 ASIA A and had no neurological recovery in the period of 2 months. However, he developed generalized spasticity with the MAS 1 in both lower limbs and MAS 3 in left biceps brachii. His left elbow range of motion was severely limited with the flexion posture at 90 degree. Modified Tardieu's Scale (R1 & R2 angle) difference was 15 degree.

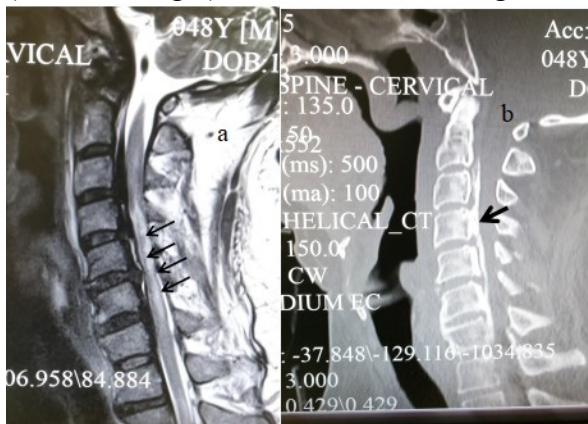


Figure 1: MRI showing cord edema worst at level of C5 b) OPLL (thick arrow).

A graduated elbow extension thermoplastic splint was prescribed with the initial elbow range of 75 degree in flexion and wrist in neutral position(Fig. 2a). A marked reduction in

was noted a week later with MAS 1 and the left elbow joint achieved a full extension and wrist in neutral position(Fig. 2b).



Figure 2: a. Elbow flexed at 90 degree upon and wrist extended 60 degree. b. The splint with hinge over the elbow strapped to the spastic left upper limb using Velcro to maintain limb in position and adjusted gradually. c. Elbow showing near full extension after 1 week duration on splint.

CONCLUSION

Graduated low temperature elbow extension splint should be considered as the treatment modality of choice even in severe spasticity while SCI patients are not stable enough to be offered other anti-spastic treatment options.

REFERENCES

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