

DEBATE: SPASTICITY MUST BE TREATED: YES

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This presentation will introduce a debate on spasticity treatment, which will, hopefully, be informative and valuable and will highlight the need to treat spasticity. It is always difficult to use the word, "Must", in Medicine, but below are the indications for treatment and reasons why clinicians should consider it important to manage.

Why Treat Spasticity?

Spasticity can, in itself, be disabling and, if inadequately untreated, may lead to consequences¹, such as:

- muscle shortening,
- contractures (leading to abnormal body segment loading and sensory change)
- limb deformity and altered body mechanics, altered body image,
- the need for special wheelchairs and seating and pressure-relieving equipment,
- loading on pressure points,
- pressure sores,
- difficulty in the management of pressure sores,
- pain from muscle spasms,
- degenerative joint disease,
- loss of function, and
- mood problems and inability to participate in rehabilitation.

The misery of painful spasms or of tendon traction on bones is well known and the complications will prevent patients from achieving their optimal functioning. Deconditioning from ill-health and pain will also have a negative effect will reduce quality of life for patients and their carers. There are, therefore, very good clinical, humanistic and economic reasons to treat it effectively and judiciously. Complications include loss of function, pain, deformity and disfigurement, contractures, joint subluxation and dislocation, compression neuropathy and pressure ulcers and a greater requirement for nursing care, etc.

Indications of Antispastic Treatment

A guide is required to define the aims of treatment, as patients have individual programmes of rehabilitation. Although there are many reasons to treat spasticity, the actual indications are quite specific and clinicians should follow these closely². Non-ambulatory patients with moderate to severe weakness, hyperflexia, clonus and painful flexor spasms interfering with hygiene and nursing usually require treatment of spasticity.

Indication	Example
Functional Improvement	Mobility: enhance speed, quality or endurance of gait or wheelchair propulsion Improve transfers Improve dexterity and reaching Ease sexual functioning
Symptom Relief	Relieve pain and muscle spasms Allow wearing of splints/orthoses Promote hygiene Prevent contractures
Postural Improvement	Enhance body image
Decrease Carer Burden	Help with dressing Improve care & hygiene Positioning for feeding, etc.
Enhance Service Responses	Prevent need for unnecessary medication & other treatments Facilitate therapy Delay or prevent surgery

Principles of Management

The main goal of therapy is to increase functional capacity, relieve symptoms and decrease caregiver burden. The consequence of reducing spasticity should be assessed. If spasticity offers stability to a joint, its reduction may decrease the patient's function, but, if significant spasticity is the issue, treatment should improve the patient's activity¹.

Spasticity requires treatment when it is causing harm and this is the sole indication². Some patients early on after their stroke or brain injury are helped by their spasticity. It may help to transfer, stand and ambulate, maintain muscle bulk, prevent deep vein thrombosis and osteoporosis¹. For example, patients may start to support their weight by using their spastic lower limb when the degree of weakness in the leg would not allow it. Clearly, for these patients, reducing muscle tone would not be helpful, but it requires treatment when it causes harm and this is the sole indication for treatment². Successful treatment strategies have now been developed and there is good evidence of treatment effectiveness². Physical management (good nursing care, physiotherapy, occupational therapy) through

postural management, exercise, stretching and strengthening of limbs, splinting and pain relief is the basis of spasticity management³. The aim of treatment is to reduce abnormal sensory inputs and decrease excessive α -motor neuron activity¹. All pharmacological interventions are adjunctive to a programme of physical intervention and, although stretching plays an important part in physical management, it needs to be applied for several hours per day⁴. To ensure this, limb casting has been developed in this field to provide a prolonged stretch, although some studies have suggested that task-specific training might be more effective⁵.

Management

Preventing it getting worse is very important in management and this includes:

- dealing with noxious stimuli, e.g. from pressure ulcers, urinary retention, constipation, infection, pain
- patient and carer education regarding proper positioning,
- regular skin inspection and a
- good management of bladder and bowel, proper positioning,
- daily stretching to maintain range of motion,
- splinting^{7,8}, serial casting, functional electrical stimulation,
- motor re-education and biofeedback

Medical

All medical interventions are adjunctive to a programme of physical treatment, removal of exacerbating stimuli and patient and carer education. This presentation will not go into the details of management, but therapeutic options are as shown in the figure.

References

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Figure: Management strategy for adults with spasticity

