Buckinghamshire Hospitals NHS
NHS Trust

NATIONAL SPINAL INJURIES CENTRE

STOKE MANDEVILLE HOSPITAL

A HANDOUT PREPARED FOR PATIENTS AND CARING STAFF

BY

SPINAL OUTPATIENT SERVICES

CARE OF A PARALYSED LIMB FRACTURE IN SPINAL CORD INDIVIDUALS (WHEN CASTING)

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CARE OF A PARALYSED LIMB FRACTURE IN SPINAL CORD INDIVIDUALS (WHEN CASTING)

Signs & symptoms of a fracture

1. Swelling of the limb.
2. Redness/bruising around the fracture sight.
3. Heat around the fracture sight.
4. Autonomic Dysreflexia.
5. Pain.
6. Increased Spasms.
7. Raised temperature.
8. Sweating.
9. Obvious visible signs i.e. bone showing, deformity.

Identifying the Fracture

- Attend the Accident & Emergency Department, at the nearest hospital.
- The only way to identify a fracture is by X-Ray examination.
- When a fracture is identified the medical staff will decide the most effective way to treat it.

Aims of Treatment

1. To maintain a good bone alignment and promote healing of the fracture.
2. To prevent skin damage under the cast.
3. To prevent long term complications to adjacent joints.

Treatment

Using a cast to maintain a good bone alignment is an appropriate method of treating fractures for people with spinal cord injury. It must be emphasised that due to lack of sensation & movement below the level of spinal cord injury, pressure/plaster sores, can develop without detection. Therefore there is the need for the following steps to be taken, in this treatment.

1. Inform the person applying the cast of the paralysis and lack of sensation, so that extra padding can be applied around bony prominences, and if possible a lightweight cast should be used.

2. 24 – 48 hours after application the cast must be bi-valved (cut in half lengthways) by the A & E or Orthopaedic team at the treating hospital. The bi-valved edges will need sufficient padding to ensure there are no sharp areas to damage the underlying skin.

3. Once bi-valved, the cast should be removed daily to allow the skin to be checked for signs of pressure:
   - red marks
   - blisters
   - bruising
   - broken skin

   It is not advisable for the patient to carry out this inspection alone, as the fracture site must be supported whist the cast is not in situ. Therefore a District Nurse or Carer should be in attendance and aware of specific needs. After the skin has been inspected, the bi-valved cast is replaced with sufficient padding and secured with bandages or strapping to maintain stability of the fracture site.

4. A District Nurse should treat any compromised skin. A “Window” (hole) may be cut in the cast by the hospital treating team if considered necessary. This will remove direct pressure.

   Particular areas of vulnerability are:

   - Heels
   - Malleoli (ankles)
   - Tibial tuberosities (Knee joints)
   - 1st metatarsal phalangeal joints (toes)
   - Wrists
   - Elbows, knuckles

5. Oedema/swelling of the affected limb will be reduced thereby aiding healing if the limb is kept elevated. Leg elevators can be used whilst using a wheelchair on folding framed wheelchairs. Wheelchair Services may provide elevating leg rests for chairs provided by their service. Some mobility companies may loan one.

   The affected limb can be elevated on pillows when in bed.

   Due to an altered position when sitting in a wheelchair, with a leg elevated, all areas of skin in the seating area may be at risk from altered pressure points.

Points of Consideration

1. Care needs may be increased due to reduced mobility. Consider:
   - Transfers
   - Positioning in bed
   - Personnel hygiene

2. Increased spasms may require appropriate medication.

3. Be aware of increased risk of dysreflexia, due to pain - treat pain with analgesia.

4. Bladder and Bowel routine may be affected due to reduced mobility, and assistance may be required or short term altered management.

5. After the cast has been removed consider:

   - Contractures
   - Joint mobility
   - Skin tolerance
   - Standing in the future
   - Cleaning of dry/dead skin

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