

Guidelines on management and transfer of acute spinal cord injured patients

Queen Elizabeth National Spinal Injuries Unit, Southern General Hospital, Glasgow



We welcome referral of any acute trauma patient with spinal cord injury.
We can also advise on any other spinal injury patient and admit as necessary.
All patients must be assessed by local trauma team.

24 HOUR SERVICE

Tel: 0141 201 1100 Bleep: 6012 Spinal
Fax: 0141 201 2991

Assess

Acute assessment - recussitate and stabilise patient

Assess for cord damage - using motor and sensory charts below.

Refer

Please have the following information available when contacting the Spinal Unit SHO on-call.

Transfer

The Spinal Unit SHO will contact you on the evening before or the morning of transfer to review the following points to ensure a safe transfer.

NEUROLOGICAL ASSESSMENT - MOTOR

| | R | L |
|-----------|------|------|
| C2 | | |
| C3 | | |
| C4 | | |
| C5 | | |
| C6 | | |
| C7 | | |
| C8 | | |
| T1 | | |
| T2 | | |
| T3 | | |
| T4 | | |
| T5 | | |
| T6 | | |
| T7 | | |
| T8 | | |
| T9 | | |
| T10 | | |
| T11 | | |
| T12 | | |
| L1 | | |
| L2 | | |
| L3 | | |
| L4 | | |
| L5 | | |
| S1 | | |
| S2 | | |
| S3 | | |
| S4-5 | | |
| TOTALS | | |
| (MAXIMUM) | (50) | (50) |

MOTOR SCORE (100)

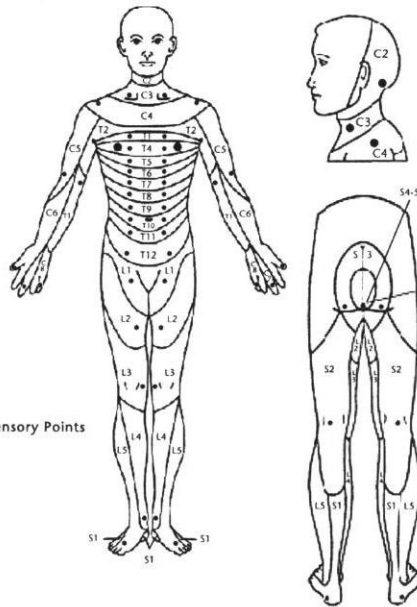
KEY MUSCLES

- Elbow flexors
- Wrist extensors
- Elbow extensors
- Finger flexors (distal phalanx of middle finger)
- Finger abductors (little finger)
- Hip flexors
- Knee extensors
- Ankle dorsiflexors
- Long toe extensors
- Ankle plantar flexors

- Voluntary anal contraction (Yes/No)

NEUROLOGICAL ASSESSMENT - SENSORY

Assess light touch and pinprick sensation using Dermatome Chart



Key Sensory Points

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IMPAIRMENT SCORE

- A = Complete:** No motor or sensory function is preserved.
- B = Incomplete:** Sensory but not motor function is preserved below the neurological level.
- C = Incomplete:** Motor function is preserved below the neurological level, and the majority of key muscles below the neurological level have a muscle grade less than 3.
- D = Incomplete:** Motor function is preserved below the neurological level, and the majority of key muscles below the neurological level have a muscle grade greater than or equal to 3.
- E = Normal:** Motor and sensory function is normal.

PROTOCOL FOR HIGH DOSE METHYLPREDNISOLONE - COMPLETE INJURIES ONLY

- EXCLUDE if
 - > 8hrs
 - Incomplete
 - Roof / cauda equina lesions only
 - Major trauma
 - Diabetes
 - Pregnancy
 - Age < 13
 - Sepsis
 - Penetrating wound

Regime: 30mg/kg in 15 mins, 45 mins pause, 5.4mg/kg/hr for 23 hours. (ref: Bracken 1990)

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| | |
|-------------------------------------|--------------------|
| Name | Age: |
| Sex | |
| Injury Date & Time: | |
| DETAILS OF INCIDENT: | |
| Alcohol or Drugs? | |
| Hospital & Ward: | Telephone: |
| Consultant: | Telephone: |
| Referring Doctor: | Page No: |
| CLINICAL CONDITION: | |
| AIRWAY: | |
| BREATHING: Spontaneous / Ventilated | CIRCULATION: Pulse |
| O2 Saturation | BP |
| Blood Gases | Fluid support |
| SPINAL INJURY DETAILS | OTHER INJURIES |
| Spinal Fractures: | Head: |
| Sensory Level: | Chest: |
| Motor Level: | Abdomen: |
| CT or MRI Findings: | Limbs: |
| | Pressure Sores: |
| TREATMENTS SO FAR | |
| PAST MEDICAL HISTORY | |
| MEDICATIONS | |

| CHECKLIST | |
|-----------------------------|--|
| Spinal immobilisation | <input type="checkbox"/> H2 blocker |
| Respiratory care | <input type="checkbox"/> LMW heparin |
| Pressure area care | <input type="checkbox"/> Anti-embolism stockings |
| Pegasus/Egerton/Turning bed | <input type="checkbox"/> C2H5OH withdrawal (sedative & thiamine) |
| Urinary catheter | <input type="checkbox"/> Tetanus |
| NG Tube | <input type="checkbox"/> MRSA Status/Swabs taken |

| | |
|-----|---|
| 1. | <input type="checkbox"/> A Airway is clear and can be maintained during transfer Recommend - Intubate prior to transfer if PCO2 > 6kPa or if respiratory failure is likely to develop during a prolonged transfer |
| | <input type="checkbox"/> B Supplemental oxygen is being administered and ventilation is adequate whether spontaneous or assisted |
| | <input type="checkbox"/> C Circulation - Haemodynamically stable/secure IV access |
| 2. | <input type="checkbox"/> Immobilisation of the spine is adequate and secure Recommend - vacuum mattress - if spinal board - with appropriate padding - hard collar - In definite or suspected cervical spinal injury |
| 3. | <input type="checkbox"/> Avoid interruption of methylprednisolone infusion if the protocol is in process |
| 4. | <input type="checkbox"/> Medical (anaesthetist) and nursing escort as indicated |
| 5. | <input type="checkbox"/> Nasogastric tube is in situ, draining freely, and connected to low suction if required |
| 6. | <input type="checkbox"/> Indwelling urethral Foley catheter is in situ and draining freely |
| 7. | <input type="checkbox"/> Skin is protected from injury |
| 8. | <input type="checkbox"/> MRSA status |
| 9. | <input type="checkbox"/> Level of SCI is documented |
| 10. | <input type="checkbox"/> Letter and if possible case notes, and all imaging and investigation results accompany the individual |

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