REHABILITATION IN SURGICAL ICU AT UNIVERSITY MEDICAL CENTRE LJUBLJANA, SLOVENIA

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Medical Rehabilitation Unit
Organisation

- Surgical ICU at University Medical Centre Ljubljana
- 20 beds for inpatients care
- Patients may be transferred directly from an emergency department or from a surgical ward if they rapidly deteriorate or immediately after surgery
- Majority of the patients are admitted for trauma, neurosurgical conditions or after abdominal surgery
- Between 550 and 600 admissions every year
Organisation

- The service is managed by intensivists
- Direct access to the rehabilitation programme
- Rehabilitation programme is designed especially for critically ill
- Patients are treated with multidisciplinary and multiprofessional team, rehabilitation is part of the team
Mutidisciplinary team

- Rehabilitation team:
  - 1 PRM specialist
  - 2 physiotherapists
  - 1 occupational therapist (on call)
- Intensivists
- Surgeons
- ICU nurses
- Respiratory physiotherapists
- Psychologist
- Neurologist, specialist on infection disease, radiologist, ENT specialist...
- Social worker, hygienist, dietician
Multidisciplinary team

- Regular exchanges of information between team members
- Daily rounds
- Regular rehabilitation team meetings once in a week since 2009 with patients records
Assessment tools and outcome measures

- Vital signs: APACHE II, SAPS, SOFA
- Pain: VAS/CPOT
- Sedation: RASS
- Alertness: AVPU
- Delirium: CAM-ICU
- Nutrition: NRS 2002
- Neurological classification of SCI: ASIA
- ROM
- Awkening and comprehension: 5 commands
- Muscle strength at discharge: MRC scale, MMT
Rehabilitation programme

- Exclusion criteria for rehabilitation programme
- Assessment of the patients before starting the rehabilitation programme is done in 98.8% of all admitted patients
- 79% patients are included in rehabilitation programme
Exclusion criteria

- Respiratory instability
- Hemodynamic instability
- Neurologic instability
- Other medical reasons (unstable fractures, very low platlet count,...)
Goals of the rehabilitation programme in ICU

- Diminished functional decline after critical illness
  - Prevent the effects of prolonged bed rest
    - ICUAW
  - Preventing/diminishing the cognitive deterioration
  - Preventing long term effects of ICU stay
- Early implementation of occupational therapy
- Improving communication of ventilated patients
Rehabilitation programme

- Day of admission:
  - Assessment
  - Exclusion criteria
    - If not rehabilitation programme is started
- 1st-3th day of hospitalisation
  - Reassessment
  - Exclusion criteria
    - If not rehabilitation programme is started
  - Exclusion criteria for ES
    - If not ES of quadriceps muscle is started
- Next days
  - Reassessment of the patient
  - Exclusion criteria
    - If not rehabilitation programme is started
Sedated / unresponsive patient

- Regular changes of position
- PROM/PNF
- Up-right position in bed chair
- Bed cycling / ES
- OT
Awake / responsive patient

- Passive to active ROM
- Bed mobility activities
- Sitting in a bed chair to sitting at the edge of the bed, standing, walking
- Bed cycling / ES
- OT
Rehabilitation programme and quality improvement

- Improve communication of intubated or trachetomised patient with tabs
- Multidisciplinary team-work approach
- Changing the culture in ICU from surviving to functioning
Rehabilitation programme

- Rehabilitation records are in the patients documentation
- Formal discharge report
- After discharge from the ICU, post-ICU rehabilitation is provided for the patients on the surgical wards in the hospital.
Questions