National MajorTrauma Rehabilitation Group

NMTRG Guidelines for the assessment and rehabilitation of the Major Trauma patient

Discipline: Physiotherapy

Guideline: Management of Abdominal injuries

The Physiotherapist should have working knowledge of the following anatomy and function of;

- Areas of the abdomen- Peritoneal cavity, Peritoneum, Inguinal Triangle & canal.
- Bones of the abdomen- The Lumbar Spine
- Connective Tissues, Muscles and innervation of the abdomen- Anterolateral abdominal wall, Rectus Sheath, Posterior Abdominal wall
- The accessory of the abdomen: Liver, Gall Bladder, Pancreas, Spleen, Adrenal glands, Kidneys, The Mesentery.
- The Gastrointestinal tract: Oesophagus, Stomach, Small Intestine, Large Intestine, Colon, Appendix, Cecum, Rectum, Anal canal
- Vasculature of the abdomen: Arterial supply and Venous drainage

And have a knowledge of:

- Blunt vs Penetrating abdominal mechanisms of injury and clinical relevance e.g. Grading of organ injury
- Principles of tissue healing
- Awareness of abdominal planes, 4 abdominal quadrants, 9 abdominal-pelvic regions.
- Understanding rationale for abdominal injury management e.g Surgical vs Conservative
- Surgical incisions and clinical relevance
- Surgical procedures e.g Damage control surgery, Trauma Laparotomy, Laparostomy, Reconstructive surgery
- Post operative restrictions/limitations e.g. wound care, drains, stoma care
- Post operative complications
- Nutritional support & methods of administration - Enteral vs Parenteral options

The Physiotherapist should be able to recognise;

- Pain limiting presentation and impact upon planned intervention
- Importance of a serial Pain assessment & management
- Signs of a deteriorating patient and escalation policy
- Impact of abdominal trauma upon Respiratory function
- Impact of abdominal trauma upon overall mobility and overall functional performance
- Implications for abdominal trauma in a Polytrauma patient e.g additional complexity of presentation
- Contraindications and considerations for specific physiotherapy treatment modalities e.g. use of non-invasive positive pressure ventilatory assistance, positioning.
- Nutritional mode of delivery and impact upon therapy intervention and progress
- Early signs of complications with wound drains, skin breakdown, problems with stoma.

The Physiotherapist should be able to offer the following interventions:

- Pain assessment & escalate management as required
- Comprehensive Respiratory assessment

- Respiratory management: Provide Education, advice, demonstration & adjuncts to optimise respiratory function in ventilated and non ventilated patients in the prevention of secondary complication e.g. Airway clearance, Lung recruitment, Abdominal musculature splinting.
- Complex Respiratory management as indicated e.g. Airway clearance, Ventilator weaning, Tracheostomy weaning.
- Provision of early positioning & seating advice for both patient and/or care staff
- Neuro- Musculoskeletal assessment of the Chest wall, Abdominal or Pelvic musculature function as relevant
- Early Functional assessment e.g. Bed mobility, sitting balance, Transfers, functional mobility
- Initiation of an early & progressive goal oriented rehabilitation program for both surgically & conservatively managed patients e.g. mobility, Strength & Conditioning, Gait re-education, self management, energy conservation, exercise tolerance
- Joint MDT working particularly liaising with treating surgical teams, therapy colleagues & specialist nursing.
- Provide education and training for patients and caregivers e.g. Self management strategies, Positioning, early mobility.
- The ability to fabricate or access simple supportive orthoses e.g. abdominal splint, binder
- Provide advice & education re: Return to normal & high impact activity e.g. contact sports
- Onward referral to community services & follow up Hospital clinic with view to return to baseline level of function
- Completion of a Rehabilitation Prescription to be given/explained to the patient at the point of discharge. A copy should also be provided to GP & next care provider as required.

The Physiotherapist is expected to complete this assessment and intervention:

(* Within the limits of pain and post operative restrictions)

- Respiratory & early functional Assessment & intervention should take place Day 1 post operatively for surgically managed isolated abdominal injuries, polytrauma patients or conservatively managed patients identified to be at high risk of deterioration from a Respiratory perspective.
- Comprehensive assessments for conservatively managed low risk patients with isolated abdominal injury may not always be indicated but <u>all patients</u> should be screened on an individual basis and considered for assessment & intervention.
- Daily Physiotherapy review thereafter until return to baseline level of function is reached or onward recommendations are made.
- Physiotherapy services should be available to Trauma patients in every acute setting working 7 days per week.
- Advocate for patient follow up in Trauma clinic to include review of overall functional recovery 4 weeks post discharge.

The Physiotherapist should have knowledge of additional services including;

- Inpatient MDT e.g. Dietetics, SLT, Medical team
- Specialist nursing e.g Stoma care, tissue viability, Scar management
- MDT Outpatient Trauma Clinic
- Charitable organisations e.g. peer support, violence reduction, victim support, youth violence support.

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- Psychology & Psychiatric services
- Legal Advice- Personal or Criminal injury claims
- Understanding of the effect of injury on return to work and if Citizens Advice may be required

The Physiotherapist understands how to access the following pathways;

- Community Domiciliary MDT Therapy services: SLT/Dietetics/PT/OT as indicated
- Outpatient Physiotherapy services
- Pelvic Health Physiotherapy e.g. Reconstructive/ reversal abdominal candidates
- Day hospital services e.g ambulatory care
- Trauma clinic-Outpatient

Consideration for long term rehabilitation;

- Return to sport
- Vocational Rehab