The Adult Blunt Chest Injury Pathway

NHS Lancashire and South Cumbria Critical Care & Major Trauma Operational Delivery Network

For catastrophic injuries (unmanageable airway, breathing or catastrophic haemorrhage): Go to L&SC 'PIT STOP' pathway.

Think TXA

** MTC- Major Trauma Centre
¥ TTL – Trauma Team Leader
BTH – Blackpool Teaching Hospital

Trauma Units should locally manage patients with isolated rib fractures and no significant underlying lung injury, or those not meeting the polytrauma definition (two or more organ systems, including midshaft femur #) by following the Network analgesic ladder +/- involvement of local anaesthesia or critical care services.

For confirmed isolated chest injuries please consider discussion with Cardiothoracics (BTH) as per the yellow box criteria.

For confirmed polytrauma (two or more organ systems, including midshaft femur #) with chest injuries.
Please consider discussion with the MTC TTL¥ as per green box criteria**

Accepted for transfer to MTC or BTH Cardiothoracic?

Yes → * NWAS transfer within appropriate time frame: Contact Complex Incident Hub for transfer 01772 867604 or 01772 867607

No → For urgent local critical care review?

Yes → Accepted?

Yes → Admit local Critical Care Unit
Consider referral to Rib Fixation Service (blue box)

No → Declined or Critical Care Intervention not required at that time

No → Admit to ward
Analgesia
Pain Team referral
Physio referral
Review by both < 24hrs
Close observation
Consultant reviews

Improving Clinical Picture
O2, Pain, deep breaths, and cough stable

Simple analgesia
Written advice
Safety net
Discharge

Suboptimal clinical picture/deterioration despite best available analgesic regime (see Network guidance)
Work of breathing – RR >20, Unable to Cough/Deep breathe x3, Increased FiO2 requirement, Fatigue

Consider re-referral to Critical Care if appropriate
Consider referral to Rib Fixation Service (blue box)

Best ward level care and consider ceilings of treatment if not appropriate for Critical Care

Threshold for Blackpool Cardiothoracic discussions

ISOLATED Chest Injury with one of:

- Rib fractures and/or Flail Chest with suboptimal clinical picture despite best available analgesic regime (see Network guidance)
- Sternal/1st rib fractures
- Significant lung contusions
- Pneumomediastinum
- Surgical emphysema or persistent air leak despite chest drains
- Pneumothoraces/haemothoraces causing significant respiratory/circulatory compromise.
- Diaphragmatic Injuries
- Ongoing bleeding from chest drains (>1000ml initial drainage or >200mls/hr)
- Aortic dissection/transection

Contact on-call cardiothoracic consultant via BTH switchboard on direct number (for emergency referrals only) - 01253 953777 Blp 1586

Threshold for **MTC *TTL discussions

POLYTRAUMA – two or more organ systems (includes midshaft femur #) with Chest Injury including one of:

- Rib fractures and/or Flail Chest with suboptimal clinical picture despite best available analgesic regime (see Network guidance)
- Sternal/1st rib fractures
- Significant lung Contusions
- Pneumomediastinum
- Surgical emphysema or persistent air leak despite chest drains
- Pneumothoraces/haemothoraces causing significant respiratory/circulatory compromise
- Diaphragmatic Injuries

Contact Preston MTC TTL¥ on 07999 406038.**
If ongoing bleeding from chest drains, aortic dissection/transection, then also d/w Cardiothoracics (BTH) as per yellow box

Potential indications for rib fixation

- Flail Segment impeding normal mechanism/cough
- >3 displaced ribs from 3-10
- Invasive ventilation due to chest injury
- Significantly deformed chest wall
- P/F ratio <26
- Avoidance of tracheostomy
- Prevention of deterioration in frailty
- Patient unable to meet physio goals
- Patient pain not controlled despite best available regime as per Network analgesic ladder

Contact LTH Ortho Consultant on-call via switch on – 01772 716565

Frailty

Clinically frail patients (use Clinical Frailty Scale if >65yo; clinical judgement if ≤65yo) may be most appropriately managed in the receiving TU.

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