Pathway for Chest Trauma Patients (RIE & SJH Only)

Blunt Chest Trauma

Major Trauma Ward

(only when the MTW is full and there are no patients identified for step down then admission to cardiothoracic ward would be appropriate)

- ✓ STUMBL/BATTLES score >15
- ✓ Fractures of 3 or more ribs
- ✓ Chest wall deformity after blunt trauma
- ✓ Flail chest (clinical or radiological)
- ✓ Pneumothorax after blunt chest trauma or notchest drain insertion
- ✓ Pneumomediastinum after blunt chest trauma
- ✓ Any Haemothorax after blunt chest trauma (if ICD placed then initial blood loss <500ml or persistent blood loss <200ml per hour over 2-4 hours)
- ✓ Sternal fractures that require admission (e.g. abnormal ECG/trop) without haemopericardium
- ✓ Pulmonary contusion after blunt chest trauma

General ICU

- ✓ Significant pulmonary contusion after blunt chest trauma and significant hypoxia (PO_2<65mmHg or 8.7kPa, SO_2<90%) despite oxygen supplementation
- ✓ Patients with blunt thoracic aortic injury at the site of aortic isthmus or descending thoracic aorta (treated with endovascular stenting)
- ✓ Acute diaphragmatic injury or rupture after blunt trauma (requiring laparotomy)
- ✓ Traumatic asphyxia
- ✓ Oesophageal injury after blunt trauma

AMU

- ✓ AMU v Cardiothoracics - Patients with <3 rib fractures on CT, a STUMBL score <16 without contusions/haemothorax/pneumothorax who require admission are lower risk of complications and the ED consultant/ST4 should consider if AMU is appropriate.

Cardiothoracic Critical Care

- ✓ Right-sided isolated diaphragmatic injury or rupture after blunt trauma (requiring thoracotomy)
- ✓ Patients with injury of the large vessels (ascending aorta and aortic arch)
- ✓ Haemoptysis/endobronchial blood loss/massive contusion with significant impairment of mechanical ventilation/tracheobronchial tree injury
- ✓ Persisting or retained haemothorax (loculation and/or clots) or empyema or persistent air-leakage after blunt chest trauma (requiring VATS or thoracotomy in an acute or later phase)
- ✓ Massive subcutaneous emphysema or significant air-leakage over the chest tube after blunt chest trauma
- ✓ Uncontrolled pain, or pain that impairs adequate ventilation

Emergent ED Thoracotomy / Theatre / Cardiothoracic Critical Care

Treated with Emergent ED Thoracotomy or Theatre

- ✓ Haemothorax after blunt chest trauma (with initial massive bleeding >1.500ml)

Theatre/Cardiothoracic HDU/ICU

- ✓ Haemothorax after blunt chest trauma with initial blood loss >500ml or persistent blood loss >200ml per hour over 2-4 hours over the chest tube

Treated with Emergent ED Thoracotomy or Transferred to Cardiothoracic HDU/ICU/Theatre

- ✓ Sternal fractures with abnormal echocardiogram (e.g., haemopericardium)
- ✓ Blunt injury of the heart (blood loss/pericardial tamponade

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Penetrating Chest Trauma

Cardiothoracic ICU

- ✓ Patients with evidence of significant blood loss, including moderate/large haemothorax requiring ICD
- ✓ Intracardiac embolic missiles
- ✓ Systemic air embolus due to central lung injury

General ICU

- ✓ Penetrating chest trauma involving other body systems/specialties (e.g. abdominal, neck)
- ✓ diaphragmatic injury from penetrating trauma (with potential both abdominal and thoracic injuries)
- ✓ Patients with oesophageal injury from penetrating trauma

Major Trauma Ward

- ✓ Small pneumo- or haemothorax in stable patient with or without chest drain insertion)

Treated with Emergent ED Thoracotomy, Theatre orCardiothoracic Critical Care

Treated with Emergent ED Thoracotomy or Theatre/Cardiothoracic ICU

- ✓ Penetrating cardiac trauma (depending on the degree of pericardial tamponade/blood loss/haemodynamic stability)
- ✓ Patients with great vessel injury after penetrating thoracic trauma (depending on the degree of pericardial tamponade/blood loss/haemodynamic stability)

Treated with Emergent ED Thoracotomy or Theatre

- ✓ Pulmonary injuries secondary to penetrating trauma (with initial massive bleeding >1.500ml)

Theatre/Cardiothoracic HDU/ICU

- ✓ Pulmonary injuries secondary to penetrating trauma (with initial blood loss >500ml or persistent bleeding >200ml per hour over 2-4 hours or large/persistent air leak)

Thoracic Trauma Complications

- Patients with thoracic surgical complications of chest trauma (empyema, bronchopleural fistula, organised haemothorax, chylothorax, diaphragmatic hernia, lung abscess, arteriovenous fistula, tracheoesophageal fistula, bronchial stenosis, pseudoaneurysm, great vessel fistula, pericarditis, mediastinitis, and chest wall hernia)should be transferred to Cardiothoracic ward/HDU/ICU for surgical management.