



Standard Treatment Workflow

CHEST TRAUMA

ICD-10-S29.9

MECHANISM AND SCENARIO

- Body acceleration and deceleration (Road traffic injury)
- Body compression (Crush injuries fall from height)
- Penetrating injuries (Missile injuries, stabs)

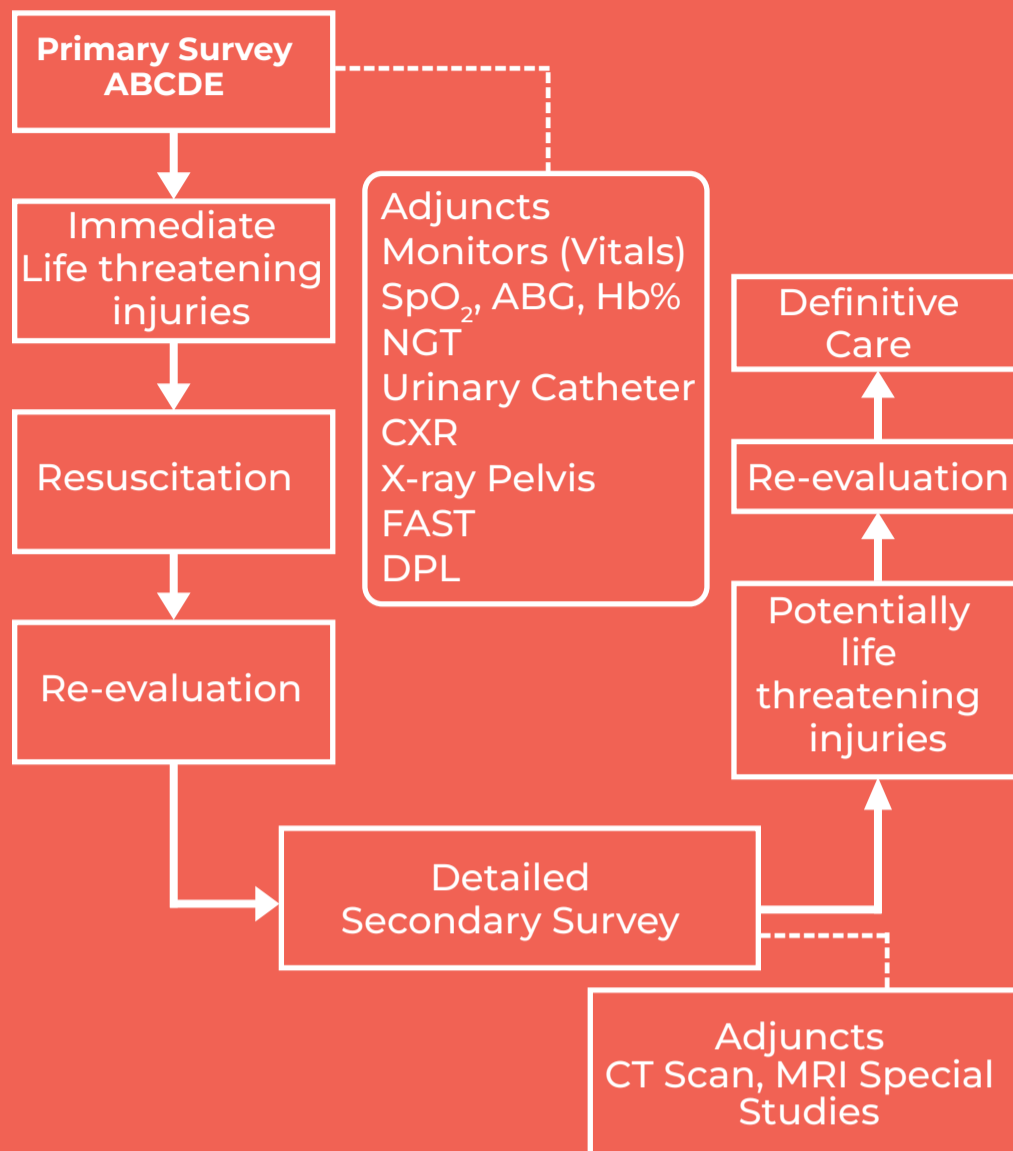
PRESENTATION

- Pain over the chest
- Shortness of breath
- Cyanosis
- Swelling of chest wall
- Facial/limb puffiness
- Unconsciousness
- Associated blood loss/pallor

ADJUNCT TO PRIMARY SURVEY

- Obtain a portable AP chest x-ray to assess:
- Intra-thoracic injuries
 - Endotracheal tube placement (if intubated)
 - Post chest tube insertion

INITIAL ASSESSMENT & MANAGEMENT OF A TRAUMA PATIENT



INITIAL ASSESSMENT AND PRIMARY SURVEY

Primary survey (ABCDEs) aims at recognition and management of immediate life-threatening injuries largely based on clinical examination.

ABCDE

- Airway maintenance with cervical spine control
- Breathing and ventilation
- Circulation with haemorrhage control
- Disability (brief neurological assessment)
- Exposure/Environmental control: Prevent Hypothermia

OTHER VITALS

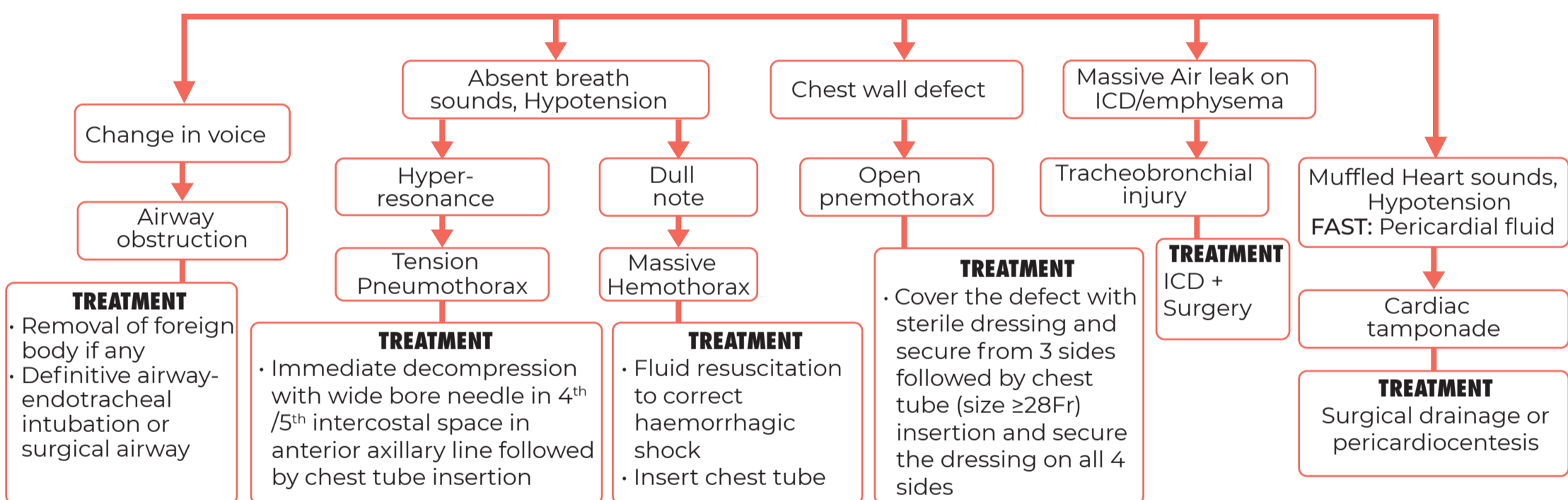
- Blood pressure
- All peripheral pulses
- Altered/Muffled Heart Sounds

ALSO LOOK FOR

- Neurological deficits
- Tenderness over chest, first rib fracture
- Subcutaneous emphysema

IMMEDIATE LIFE THREATENING CHEST INJURIES (LETHAL SIX)

Respiratory distress, Tachypnoea, Low SpO₂



POTENTIALLY LIFE THREATENING CHEST INJURIES (HIDDEN SEVEN)

OESOPHAGEAL INJURY

DIAGNOSIS

- Diagnosed by food particles in ICD drainage or leak of dye in pleural cavity

MANAGEMENT

- Surgery

FLAIL CHEST

MANAGEMENT

- Pain control
- Oxygenation- Consider endotracheal intubation
- Chest tube insertion if associated with pneumothorax/hemothorax
- Consider transfer to closest appropriate facility

PULMONARY CONTUSION

CLINICAL FEATURES

- Dyspnoea, Tachypnoea, Tachycardia, Chest wall bruising, Flail Chest

DIAGNOSIS

- Diagnosed on Chest x-ray

MANAGEMENT

- Adequate analgesia
- Humidified oxygenation
- Consider endotracheal intubation
- Consider transfer to closest appropriate facility

RUPTURED THORACIC AORTA

DIAGNOSIS

- Suspected on Chest x-ray
Confirmation on CT angiography chest

MANAGEMENT

- Stenting/open surgery

CARDIAC CONTUSION

DIAGNOSIS

- By ECG, Echocardiograph and troponin levels

MANAGEMENT

- Give supportive treatment and consider transfer to closest appropriate facility

SIMPLE PNEUMOTHORAX

TREATMENT

- Chest tube insertion (> 28Fr) in 4th/5th intercostal space just anterior to midaxillary line

RUPTURED DIAPHRAGM

- Surgery

ABBREVIATION

ABG: Arterial Blood Gas

CT: Computed Tomography

CXR: Chest Radiography

DPL: Diagnostic Peritoneal Lavage

ECG: Electrocardiogram

ICD: Intercostal Drainage Tube

FAST: Focused Assessment with Sonography in Trauma

MRI: Magnetic Resonance Imaging

NGT: Nasogastric Tube

REFERENCE

1. Subcommittee AT, International ATLS Working Group. Advanced trauma life support (ATLS®): the ninth edition. The journal of trauma and acute care surgery. 2013 May;74(5):1363-6.

KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES