

Trauma Moulage

- n Universal Precautions
- n Primary Survey (ABCDE)
- n NG and Foley
- n Films
- n Secondary survey
- n Consultation and transfer



Universal Precautions

- Gloves
- Goggles
- Mask
- Apron
- Leggings



Primary Survey

- n A : Airway + C-spine
- n B : Breathing + O₂
- n C : Circulation + Haemostasis
- n D : Disability (AVPU + pupils)
- n E : Exposure + Environment
- n F : Films of C-spine, chest, and pelvis
- n G : Gastric tube and Foley



Airway

- n Jaw thrust + in-line immobilization
- n Patent if patient can talk
- n Artificial airway if tongue drop
- n Suction prn
- n Check trachea for deviation, hematoma, crepitations, disruption
- n Rigid neck collar



Breathing

- n Echymosis
- n Crepitations
- n Paradoxical movements (flail chest)
- n Equality of breath sounds
- n Percussion note (dull / tympanic)
- n Tension pneumothorax
- n Give O₂



Tension Pneumothorax

- n Signs
 - Neck : JVE, tracheal deviation, crepitations
 - Chest : Decreased BS, tympanic percussion, crepitations
- n Needle decompression
 - #14 cath; 2nd ICS on midclavicular line
- n Tube thoracostomy
 - #38 chest tube; 5th ICS on anterior axillary line



Circulation

- n 止血 : Dress and compress
- n 抽血 : Two #16 cath over anterior cubital veins; LR; challenge 2L if hypotensive (1L in elderly)
- n 備血 : 8U of whole blood; O-negative if emergent
- n 送血 : CBC, sugar, electrolytes, ethanol
- n Monitor : SpO2, EKG, BP



Disability

- n Pupils
 - Anisocoric? Sluggish? Dilated? Pinpoint?
- n AVPU
 - Alert
 - Responsible to verbal stimuli
 - Responsible to painful stimuli
 - Unconscious
- n Limb movements
 - Symmetric?



Exposure

- n Exposure
 - Completely undress the patient
- n Environment
 - Avoid hypothermia



Films (portable)

C-spine lateral

Chest AP

Pelvis AP



Gastric Tube / Foley

- n Gastric tube
 - Nasally
 - Orally if maxillofacial trauma (+)
- n Foley catheter
 - Do rectal digital exam first
 - Withheld if prostate not palpable or high riding
 - Suprapubic cystostomy



Secondary Survey

- n 頭 : Deform? Bleeding (耳鼻喉)?
- n 頸 : Neck veins, trachea, hematoma
- n 胸 : BS, paradoxical movements, bruises
- n 腹 : Soft? Distend? Pelvis stability? DPL?
- n 四肢 : Deform? Pulse? Motor? Sensory?
- n 背 : C-, T-, L-spine deformity, tenderness



Lastly.....

- n Consultation
 - CVS : Emergent thoracotomy, vascular emergency
 - GS : Exploratory laparotomy
 - Ortho : External fixation
 - PS : Fasciotomy, escharotomy
- n Transfer
 - Physician-to-physician communication
 - Equipment and personnel



LEFT THORACOTOMY IN TRAUMA ARREST

- n Indication :
 - ☐ 穿刺傷, 送醫途中死亡
- Contraindications :
 - Absolute :
 - ☐ 鈍挫傷, 到院前死亡
 - Relative :
 - ☐ 鈍挫傷, 於急診處死亡
 - ☐ 穿刺傷, 於災害現場死亡



LEFT THORACOTOMY

- n Experienced physician
- n 1 to 2 L of fluid before the thoracotomy unless tamponade is suspected
- n Cardiac injury sutured or controlled with digital pressure
- n Major pulmonary bleeding can be controlled by cross-clamping the pulmonary hilum
- n Descending aorta cross-clamped to perfuse the brain and heart selectively (孕婦除外)



Field Pronouncement of Death

- n American College of Surgeons
 - Dependent lividity, rigor mortis, or decomposition
 - Decapitation or hemicorporectomy
 - No signs of life for > 10 min
 - ☐ No spontaneous ventilatory effort
 - ☐ No pulse or BP
 - ☐ No electrical cardiac activity



Field Pronouncement of Death

- n National Association of EMS Physicians
 - No signs of life initially, associated with :
 - ☐ Brain matter extruding from a head wound
 - ☐ Underwater submersion for > 2 hr
 - ☐ Evisceration of the heart
 - ☐ Complete incineration
 - ☐ Multiple extremity amputations



Field Pronouncement of Death

- n Other criteria
 - Blunt trauma patients pulseless at scene
 - Penetrating trauma patients asystolic at scene
 - Any trauma patient requiring CPR for > 10 min and no return of signs of life

