TRAUMA Tips and Tricks for GPs

Christopher Dobbins
MB.BS, MS, FRACS
Division of Surgery, Division of Trauma and Critical Care
Royal Adelaide Hospital
Triad of death

- Cold
- Acidosis
- Coagulopathy
Damage control resuscitation

- Correct coagulopathy
- Warm patient
- Fill patient
- Damage Control Surgery
Damage Control Surgery

- Non definitive surgery
- Patients unstable
- Aim is control of haemorrhage and control of sepsis
- Move patient to ICU to continue resuscitation
  - Make patient metabolically and haemodynamically stable
- Return to theatre for definitive procedure
Damage control for GPs

- ABCDE (CABCDE)
- Commence Resuscitation
- Warm patient
- Control of Haemorrhage
- Control of Sepsis
- Splint Fractures
- Move patient to major centre for definitive care
Airway

• Cricothyroidotomy

• Indications
  • Can’t get airway by conventional means
  • Can’t ventilate by conventional means
  • Severe facial trauma

• Most difficult aspect of cricothyroidotomy is making decision to do it
Breathing

• Needle Thoracostomy
• 2\textsuperscript{nd} ICS mid-clavicular line
• 14g jelco
• 50% do not go in. Some go into lung
• 50% fail
• Easy to do

Not always useless but mostly

• Would I do it?
Breathing

- Finger thoracostomy
- Patient must be intubated, ventilated-Positive Pressure Ventilation
- Make hole as per chest drain
- Look and Listen for GUSH
- Prelude to chest drain
- Placement of immediate drain not required
Chest Drain

- Nipple level and above
- Big Drain (32Fr)
- 3cm incision
- Blunt dissection with artery clip
Chest Tube

- Once in, open clip up wide
- Rip out
- Finger in and sweep
- Insert tube with finger
- Tie in
- Local Anaesthetic-lots +/- fentanyl and midazolam
“Do not clamp chest tubes—it is dangerous!”
Circulation

- EZ IO
- Rapid Infuser Catheter
- EJV cannulation
- Swan sheath into femoral vein
- Venous Cutdown
Haemorrhage Control

Limb Pressure Tourniquet

Torso Pressure Foley's catheter
Permissive Hypotension

• If patient able to talk to you coherently and making enough urine, can accept BP ~ 80 systolic

• Pushing fluid to aim for higher BPs thought to dilute clotting factors and dislodge clots

• In NON head injured patients
Abdominal Trauma

- Penetrating Trauma
- Blunt Trauma
- The 2 are different
Blunt Abdominal Trauma

- Spleen
- Liver
- Bowel
- Mesentery
- Pelvis
- Retroperineum
Penetrating Abdominal Trauma

• Rule of Thumb
  • They all go in

• Other Rule of Thumb
  • They generally deserved it

• One medical condition where obesity is good
Penetrating Trauma

- If They're still in, Leave ‘em in
Penetrating Abdominal Trauma

- Local Wound Exploration
- Dipstick
- Finger

ALL ARE NONSENSE

- All should undergo surgical review
- Positive is positive but negative means nothing
Penetrating Abdominal Stabs

- Isolated stab wounds can be managed conservatively:
  - Patient haemodynamically stable
  - Patient has minimal signs
  - Patient alert and cooperative
- Only in a major trauma centre
- Multiple stab wounds probably need surgical exploration
- ALL SHOULD BE REFERRED FOR SURGICAL REVIEW
Gunshot Wounds

- All warrant a trip to the operating theatre
U/S

- FAST scan
- Supplanted use of DPL
- Detects presence of fluid in abdominal cavity and pelvis
- Extended FAST
  - Checks pericardium for fluid/tamponade
  - Checks for Pneumothorax
CT scan

- Gold standard investigation for blunt abdominal trauma
- Patient must be stable to perform
  - Logistically at the RAH, scan takes 30 min to perform
- Directly impacts patient management
  - Theatre vs interventional radiology vs conservative
- Dedicated contrast scans- combined arterial and venous phase
Pelvic Binder

- Pelvic Binder for all suspected pelvic injuries
- Position across greater trochanters-lower than you think
- Binder not available-use sheet and tie knees
Pelvic Spring

- If going to do it, do it only once
- If going to do X-ray or CT - not necessary
Emergency Room Thoracotomy

- Indications
  - Witnessed arrest within arrival in emergency room. Standard resuscitation efforts fail
  - Penetrating trauma
  - Blunt Trauma controversial
Aims of ED Thoracotomy

• Relieve cardiac tamponade
• Control bleeding
• Aortic compression
Risks of ED thoracotomy

- Potential for staff exposure
- Uncontrolled bleeding
Other Points

- Blood taking—generally won’t be used
- CT scans—not necessary as often need repeating
- If scans are done, please get radiology to make them available to us, we will review them early. SEND HARD COPIES
- Liaise early
Summary

• ?ABCDE (CABCDE)
• Warm patient
• Damage Control
• Package patient for transfer
• Do the Basics Well