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The ATLS[®] Moulage – A quick guide

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OVERVIEW

The Advanced Trauma Life Support (ATLS[®]) Course¹ teaches a systematic, concise approach to the early care of the trauma patient. This course is vital to guiding care for the injured patient in emergency department trauma rooms as well as in the prehospital environment. Essentially, the course training provides a common language between emergency health professionals, and is designed to save lives in critical situations.

On the last day of my ATLS[®] Course when we had to participate in a trauma moulage, I considered the feasibility and benefits of a summary guide listing the most important things to do, and the correct order in which they should be performed. The following is based on the ATLS Course Manual² and is intended as a guide to assist both novice and expert emergency health professionals in the moulage exercise, or when faced with a real life trauma event.

The eighth edition of the ATLS[®] Course Manual released in late 2008 has suggested changes³ in management with regards to Initial Assessment, Airway, Shock, Thoracic, Abominal, Head and Musculoskeletal trauma as well as trauma in Pregnancy and the Paediatric age group. The main changes have been incorporated in the summary below.

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Keywords: *airway ATLS; breathing; circulation; trauma moulage; triage*

The ATLS MOULAGE

Standard Precautions: Glove, Apron, Mask etc.

ATLS Walk - Hands ahead and parallel to each other - to secure head and neck in inline mobilization.

A: Airway and Cervical Spine

- Stabilize Cervical Spine

- Ask for O2 (15L/mt)
- Transfer Cervical Spine stabilization to assistant
- Chin Lift/Jaw thrust
- Suction
- Assess patient airway (LEMON: look, evaluate, mallampatti, obstruction, neck)
- Guedel's Airway +/- Bag valve mask +/- LMA +/- Endo Tracheal Tube (carbon dioxide detector to help confirm proper intubation of the airway³)
- Cervical Spine (collar, sandbag and tape used for stabilization)

B: Breathing

Fit Pulse oxymeter on patient (Ask assistant)

Inspect/Palpate

- Tracheal deviation
- Chest movement - present/absent, symmetric
- Bruising
- Percuss
- Dullness/Hyperresonance

Auscultate - Differential Diagnosis

1. Tension Pneumothorax - Large caliber intravenous catheter X 2 (16 gauge or larger) 2nd Intercostal space midclavicular line, Chest drain 5th Inter Costal Space in the Mid Axillary Line
2. Open Pneumothorax - 3 way seal, Chest drain 5th Intercostal space just anterior to midaxillary line
3. Massive Hemothorax - (Indication for moving on to C)
Large caliber intravenous catheter (X 2 (16 gauge or larger) for taking Bloods (for FBC, U&E, LFT, Clotting, Group & Save and Cross matching) and giving Fluids (Warmed ringer lactate or normal saline³) Chest Drain 5th Intercostal space midaxillary line
4. Cardiac Tamponade -
Large caliber intravenous catheter X 2 (16 gauge or larger) for taking Bloods (for FBC, U&E, LFT, Clotting, Group & Save and Cross matching) and giving Fluids (Warmed ringer lactate or normal saline³), Pericardiocentesis

C: Circulation

Large caliber intravenous catheter X 2 (16 gauge or larger) 1 for taking Bloods (for FBC, U&E, LFT, Clotting, G&S and Cross Matching) and 1 for giving Fluids (Warmed Ringer Lactate or Normal Saline³) - Controlled resuscitation.³

Blood Pressure Cuff

Look for other sources of haemorrhage:

1. Head - CT
2. Abdomen - DPL, FAST or CT, Call Surgeons
3. Pelvis & Long bones - Direct pressure on any site with obvious bleeding. Look at pelvic region for bruising & blood on urethra, check whether there is limb shortening/lengthening; if any of these, pelvis should be temporarily stabilized or “closed” using an available commercial compression device or sheet to decrease bleeding.³ If limb externally rotated +/-rotated internally +/- do per rectal examination (to be performed selectively before placing a urinary catheter.) Call Orthopaedicians if any suspicion of injury to Pelvis/Long bones

D: Disability

Check Glasgow Coma Scale

Brain Injury³ - Minor 13-15; Moderate 9-12

Pupils

E: Exposure

Expose completely, taking care to avoid hypothermia

References

1. American College of Surgeons Website. Available from: <http://www.facs.org/trauma/atls/information.html>.
2. ATLS[®] Student Course Manual. 8th ed. American College of Surgeons; 2008.
3. Kortbeek JB, et al. Special Report. Advanced Trauma Life Support, 8th Edition. The Evidence for Change. The Journal of Trauma, Injury, Infection, and Critical Care. 2008;64:1638-165.

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