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| **Case Title** | Motorcycle Accident |
| **Scenario Name** | Motorcycles are Death Traps |

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| **Learning Objectives -** [**Use action words**](http://ubccpd.ca/sites/ubccpd.ca/files/Accreditation_Learning%20Objectives_%20Verbs.pdf) | |
| **Knowledge:**   1. Standard ATLS protocols for blunt multi - trauma resuscitation 2. Understanding of the management of an traumatic pneumothorax/free fluid in a hemodynamically unstable patient 3. Approach to the patient with multiple severe injuries | |
| **Skills:**   1. Management of a traumatic pneumothorax/abdominal free fluid 2. Prioritizing injuries in ACLS | |
| **Attitude/Behaviours:**   1. Demonstrate Team skills / Effective Communication 2. Demonstrate Situational awareness 3. Demonstrate Graded Assertiveness | |
| **Scenario Environment** | |
| **Location** | Trauma Resuscitation room 3 |
| **Monitors** | Standard ED monitors |
| **Props/Equipment** | Chest Tube, C-collar, PRBCs, stapler, arm splint  Airway management equipment |
| **Make-up/Moulage** | Image of fractured arm & scalp laceration |
| **Potential Distractors** | Open fracture of arm distracting from life threatening injuries. |

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| **Case Introduction:** |
| 20 year old male  Motorcycle - helmet on – slid around corner and ran into tree  Obvious fracture left radius – patient ++ focused on arm injury.  Prehospital notification given. Patients starts tachycardic/hypotensive but alert. |

| **Patient Parameters** | **Effective Management** | **Notes** |
| --- | --- | --- |
| **Phase 1: Unstable**  **Condition:** Unstable Presentation  **Initial Assessment**   * **Heart Rhythm:** Sinus * **HR:** 130 * **BP:** 120/62 * **RR:** 24 * **SP02:** 94% * **T:** 36.9 * **Glucose:**  8.0 * **CNS:** GCS 15 * **Chest:** Decreased Left Side * **CVS:** HS normal * **GI:** Abdo soft - tender * **GU:** Pelvis Stable * **Integ:** 10 CM laceration base of occiput with ++ bleeding – not noticed until log roll or specifically looked for * **Arm –** Obvious fracture - ?open component – neurovascularily stable. * **Weight:** 70 kg | 1. **Take a focused history** (see Notes column)  * Intro as above * Patient too distressed about arm to answer ?’s * EHS forgot TXA if asked.   **Medical Management**   * Oxygen * Complete VS and glucose * 2 X IVs * Fluid bolus of NS/Straight to PRBCs * TXA * Full head to toe exam * Recognize unstable hemodynamics and need for acute intervention * Recognize Pneumo/Hemothorax – Chest Tube * Recognize free fluid abdomen * Recognize scalp laceration as significant source of blood loss * Avoid being distracted by fracture and manage above life threatening injuries. * Investigations – CXR, Pelvis XRay, CT Head/Cspine – Pan Scan, Labwork – CBC, G and S, Lytes, Renal function, Lipase, VBG/ABG, ECG   **Consequences of ineffective management**   * Hypotension * Cardiac Arrest | 1. **Focused history**  * No information from patient – screaming about arm.   **PMHx**   * Healthy   **Meds**   * None   **Allergies**   * None |
| **Phase 2: Deterioration**  **Condition:** Deterioration  **Physical Examination**   * **Heart Rhythm:** Sinus * **HR:** 150 * **BP:** 85/35 * **RR:** 24 * **SP02:** 98% if chest tube, 89% if no CT. * **CNS:** Stable * **Chest:** Dependent on chest tube insertion or not. | 1. **Patient Reassessment** (see Notes column)  * Patient will decline in hemodynamics and level of consciousness.  1. **Medical Management**  * Blood products – Massive Transfusion * Assess imaging * Staple Scalp Wound * Disposition – to OR * General Surgery, Thoracics and Orthopedic referral * Splint arm only if time permits.   **Consequences of ineffective management**   * Severe Hypotension * PEA arrest * Death | 1. **Patient Reassessment**   **Airway**   * Stable   **Breathing**   * May be intubated if learner recognizes deteriorating course and need for OR   **Circulation**   * Tachycardia and hypotension worsening |

**Insert more lines if more phases required.**

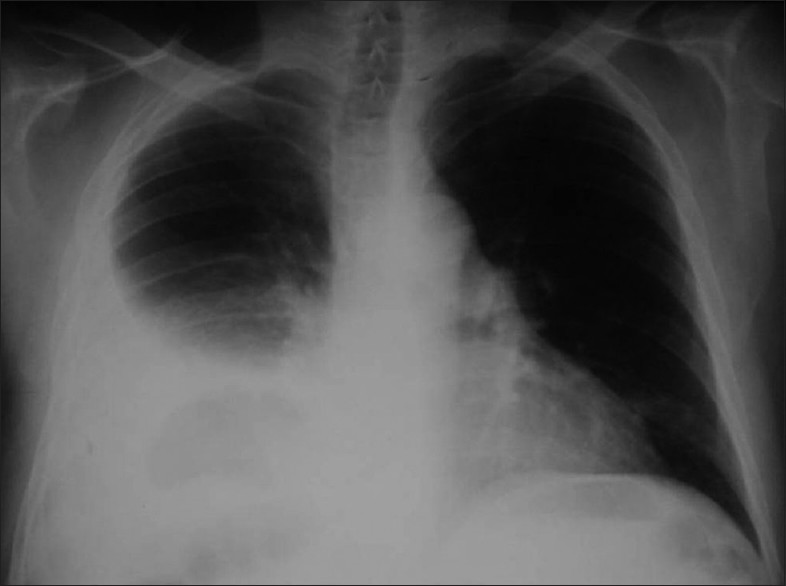
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| **Expected Patient Management** | **Debriefing Points** |
| 1. **Student** 2. **Junior Resident** 3. **Senior Resident** |  |

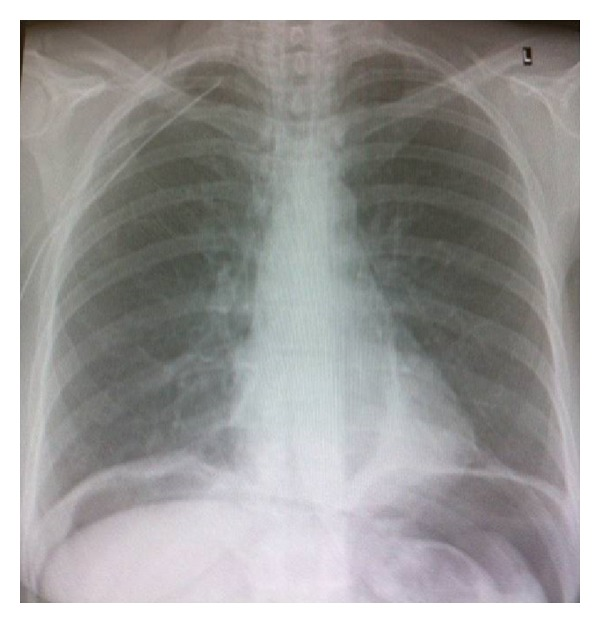
**References:**

**IMAGES**

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwj9t8mFhv_RAhUUImMKHeKIDK8QjRwIBw&url=http://www.orthopaedicsone.com/pages/viewpage.action?pageId%3D82116701&bvm=bv.146094739,d.cGc&psig=AFQjCNH0QMItLZMdLoSxlA1rpBSJn7jHOg&ust=1486593278707175)[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjdlIi4i__RAhULz2MKHQZNArsQjRwIBw&url=http://www.foamem.com/2012/06/12/a-particularly-dirty-laceration/&bvm=bv.146094739,d.cGc&psig=AFQjCNHcF-Tiho1DhZmZYOYIrjZamBR9VQ&ust=1486594825407961)

**X-RAYS**







LABORATORY \*LIVE\* Lab Summary Report

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| **Test** | **DATE/TIME here** | **Flag** (H or L) | **Reference** |
| **CBC** | | | |
| WBC |  |  | 3.5 – 10.8 10^9/L |
| RBC |  |  | 4.3 – 5.7 10^12/L |
| Hgb | **98** | **L** | 130 – 170 g/L |
| HCT |  |  | 0.37 – 0.47 L/L |
| Platelets |  |  | 150 – 400 10^9/L |
| D-Dimer |  |  | <250 mcg/L |
| **Chemistry** | | | |
| Na |  |  | 137 – 145 mmol/L |
| K |  |  | 3.5 – 5.0 mmol/L |
| Cl |  |  | 98 – 107 mmol/L |
| HCO3 |  |  | 22-26 mmol/L |
| Urea |  |  | 2.5 – 6.1 mmol/L |
| Creat |  |  | 62 – 106 umol/L |
| GFR Est |  |  | > 60 ml/min |
| Glucose - Random |  |  | 3.0 – 11.0 mmol/L |
| Lactate |  |  | 0.9 – 1.8 mmol/L |
| CK |  |  | 5 – 130 U/L |
| Troponin |  |  | <0.03 mcg/L |
| **Coags** |  |  |  |
| INR |  |  | 0.9 – 1.2 |
| PTT |  |  | 28 – 38 s |
| **ABGs** | | | |
| **Arterial** | | | |
| pH | **7.25** | **L** | 7.35- 7.45 |
| pCO2 | **55** | **H** | 35 – 45 mmHg |
| PO2 | 80 |  | 80-100 mmHg |
| BE | **10** | **H** | -2.0 to +2.0 mmol/L |
| HCO3 | **14** | **L** | 22 – 26 mmol/L |

**EKGs**

