|  |  |
| --- | --- |
| **Case Title**  | Car vs. Cyclist |
| **Scenario Name** | Death Ride |

|  |
| --- |
| **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 open pelvic fracture in a hemodynamically unstable patient.
3. Disposition of a patient with both head injury and an unstable hemodynamically significant pelvic fracture
 |
| **Skills:**1. Management of the airway in a patient with facial trauma, swelling and a head injury.
2. Binding of a pelvic fracture
 |
| **Attitude/Behaviours:**1. Demonstrate Team skills
2. Demonstrate Situational awareness
3. Demonstrate Graded Assertiveness
 |
| **Scenario Environment** |
| **Location** | Trauma Resuscitation room 3 |
| **Monitors** | Standard ED monitors |
| **Props/Equipment** | Pelvic binder or sheet |
| **Make-up/Moulage** | Facial contusions/swelling |
| **Potential Distractors** | None |

|  |
| --- |
| **Case Introduction:** |
| 50 year old femaleCycling, helmet on, struck by car—side swiped at 50-60km/hour.Thrown 15 feet. Helmet cracked and damaged.Prehospital notification given. Unstable VS with EHS. |

| **Patient Parameters** | **Effective Management** | **Notes** |
| --- | --- | --- |
| **Phase 1: Unstable****Condition:** Unstable Presentation**Initial Assessment*** **Heart Rhythm:** Sinus
* **HR:** 130
* **BP:** 92/62
* **RR:** 24
* **SP02:** 94%
* **T:** 36
* **Glucose:**  8.6
* **CNS:** GCS 8 (M4, V2, E2)
* **Chest:** Crackles Right Base
* **CVS:** HS normal
* **GI:** Soft
* **GU:** Pelvis Unstable
* **Integ:** Contusions and swelling to face/eyes/moth
* **Weight:** 80 kg
 | 1. **Take a focused history** (see Notes column)
* Intro as above
* No information from patient

 **Medical Management*** Oxygen
* Complete VS and glucose
* 2 X IVs
* Fluid bolus of NS
* Full head to toe exam
* Recognize Unstable Pelvis
* Recognize unstable hemodynamics and need for acute intervention
* Recognize Airway compromise and need for intubation.
* 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*** Further Hypotension
* Airway failure and respiratory arrest (Airway is difficult due to facial swelling)
 | 1. **Focused history**
* No information from patient

**PMHx*** HTN

**Meds*** Ramipril

**Allergies*** None
 |
| **Phase 2: Deterioration****Condition:** Deterioration**Physical Examination*** **Heart Rhythm:** Sinus
* **HR:** 140
* **BP:** 75/35
* **RR:** 20
* **SP02:** 90%
* **CNS:** Decreased GCS
* **Chest:** Crackles Right base
 | 1. **Patient Reassessment** (see Notes column)

Patient continues to decline in hemodynamics and level of consciousness1. **Medical Management**
* Increase Fluids and Blood products
* Assess imaging
* Wrap/bind pelvis
* Intubate patient with Ketamine and Roc/Succ
* Recognize potential difficult airway due to facial smash
* Disposition – to CT scan
* Neurosurgery and Orthopedic referral

**Consequences of ineffective management*** Severe Hypotension
* PEA arrest
* Death
 | 1. **Patient Reassessment**

**Airway*** No longer maintaining airway
* Needs Intubation
* Unstable Maxilla / facial smash

**Breathing** * Needs to be intubated

**Circulation*** Tachycardia and hypotension worsen in severity.
 |

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

|  |  |
| --- | --- |
| **Expected Patient Management** | **Debriefing Points** |
| 1. **Student**
2. **R1**
3. **Senior IM resident**
 |  |

**References:**

**X-RAYS**

**LABS – click** [here](https://extranet.interiorhealth.ca/IHUBCFaculty/Diagnostics/Forms/AllItems.aspx?RootFolder=%25252FIHUBCFaculty%25252FDiagnostics%25252FLabs&View=%25257bFD97E2FE-FD01-433F-B9CB-D75A4195924E%25257d) **OR fill out below**

LABORATORY \*LIVE\* Lab Summary Report

|  |  |  |  |
| --- | --- | --- | --- |
| **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 | 94 | **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 | 7.27 | **L** | 7.35- 7.45 |
| pCO2 | 60 | **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 |
| O2 Sat |  |  | 95 – 100% |

**EKGs**

