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| **Case Title**  | Spinal Injury  |
| **Scenario Name** | Skier Steve |

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| **Learning Objectives (3 or more) -** [**Use action words**](http://ubccpd.ca/sites/ubccpd.ca/files/Accreditation_Learning%20Objectives_%20Verbs.pdf) |
| **Knowledge:**1. Assessment of a trauma patient
2. Differential diagnoses of shock
3. Mechanism of Neurogenic Shock- loss of sympathetic tone in heart & vasculature = decreased HR, decreased SVR------inc cord injury
 |
| **Skills:**1. Management of Neurogenic Shock
	* Fluids, fluids, fluids
	* Dopamine B1 stimulation and HR
	* Steroids – not a standard of care
2. Optimization of patient prior to transport
	* Consider intubation
	* Management in consultation with Neurosurgeon
	* IV, foley, monitor
 |
| **Attitude/Behaviours**1. Demonstrate Team skills
2. Demonstrate Situational awareness
3. Demonstrate Graded Assertiveness
 |
| **Scenario Environment** |
| **Location** | ER  |
| **Monitors** | Standard ER monitor |
| **Props/Equipment** | C-Collar, IV meds and fluids, intubation equipment |
| **Make-up/Moulage** | None |
| **Potential Distractors** | None |

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| **Case Introduction:** |
| 55 y.o. male visiting from Saskatchewan. Ski holiday. Fell off 5 ft drop landing on head. No LOC. No helmet. C/o not being able to move his legs. Transported by ski patrol and then BCAS to hospital. |

| **Patient Parameters** | **Effective Management** | **Notes** |
| --- | --- | --- |
| **Phase 1: Neurogenic shock****Condition:** UnstableLooks scared, wearing ski clothes that are wet. Alert and oriented. Arrives in full spinal precautions.**Initial Assessment*** **Heart Rhythm:** NSR
* **HR:** 70
* **BP:** 96/48
* **RR:** 18
* **SP02:** 95%
* **T:** 35.8 C
* **CNS:** GCS 15, alert and orientated x3, some movement of shoulders, weak grip, unable to move legs, no sensation to legs
* **CVS:** pulse N; HS N
 | 1. **Take a focused history** (see Notes column)
2. **Medical Management**
* Prepare trauma room/roles
* IV, O2, Monitor
* **Airway/ Breathing**
	+ A & O, monitor
	+ Consider intubation for transport (most skilled)
* **Circulation**
	+ IV with FLUIDS
	+ Dopamine (B1 simulation + HR)
* **Other:**
	+ PTN
	+ Neurosurgery consult
	+ Foley
* **Investigations:**
* ECG:
* Labs:
* imaging
 | 1. **Focused history**
* As above, patient remembers incident

**PMHx*** Healthy

**Meds*** Nexium

**Allergies*** NKDA
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| **Expected Patient Management** | **Debriefing Points** |
| 1. **Student**
2. **R1**
3. **Senior IM resident**
 | **Teaching Objectives:**1. Assessment of trauma patient
2. Mechanism of Neurogenic shock
3. Management of Neurogenic shock
4. Optimization of patient prior to transport
 |

**References:**

**X-RAYS – Click** [here](https://extranet.interiorhealth.ca/IHUBCFaculty/Diagnostics/Forms/AllItems.aspx?RootFolder=%25252FIHUBCFaculty%25252FDiagnostics%25252FX%25252Drays&View=%25257bFD97E2FE-FD01-433F-B9CB-D75A4195924E%25257d)

**LABS**

RUN DATE: Today LABORATORY \*LIVE\* Lab Summary Report

LOCATION

|  |  |
| --- | --- |
| Name:  | Age/Sex:  |
| Acct#:  | Unit#:  | Status: Admitted  | Location: SIM  |
| Reg:  | Disch:  | Code status -  |
| COMPLETE BLOOD COUNT |
| Date  |  |  |  |  |  |
| Time  |  |  |  | Reference | Units |
| WBC |  |  |  | H |  |  | (3.5-10.8) | 10^9/L |
| Toxic changes seen |  |  |  |  |  |  | (4.3-5.7) | 10^12/l |
| Hgb |  |  |  | L |  |  | (130-170) | g/L |
| MCV |  |  |  | L |  |  | (0.37-0.47) | L/L |
| Platelets |  |  |  | H |  |  | (150-400) | 10^9/L |
| INR |  |  |  | H |  |  | 0.9-1.2 |  |
| D-Dimer |  |  |  |  |  |  |  |  |
| PTT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |
| CHEMISTRY |
| ADMISSION |  |  |  |  |  |
|  |  |  |  |  |  |
| Glucose-Random |  |  |  | H |  |  | (3.0-11.0) | mmol/L |
| Na |  |  |  | L |  |  | (137-145) | mmol/L |
| K |  |  |  | H |  |  | (3.5-5.0) | mmol/L |
| Cl |  |  |  |  |  |  | (98-107) | mmol/L |
| HCO3 |  |  |  | L |  |  | (22-26) | mmol/L |
| Urea |  | H |  | H |  |  | (2.5-6.1) | mmol/L |
| Creat |  |  |  | H |  |  | (62-106) | mmol/L |
| GFR Est |  |  |  | L |  |  | (> 60) | ml/min |
| C Reactive Protein |  |  |  | H |  |  | <10 |  |
| Lactic Acid |  |  |  | H |  |  | <2.0 | mmol/L |
| ARTERIAL BLOOD GASpH - , PC02 – , p02 – , HC03 – , O2 Sat - % |

**EKGs – click** [here](https://extranet.interiorhealth.ca/IHUBCFaculty/Diagnostics/Forms/AllItems.aspx?RootFolder=%25252FIHUBCFaculty%25252FDiagnostics%25252FECGs&View=%25257bFD97E2FE-FD01-433F-B9CB-D75A4195924E%25257d) **or paste**