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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** |
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| **Phase 1: Neurogenic shock**  **Condition:** Unstable  Looks 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

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| 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 |  | | |  | | | |  | | |  | |  |
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| 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 GAS  pH - , 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**