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| **Case Title** | TCA Overdose |
| **Scenario Name** |  |

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| **Learning Objectives -** [**Use action words**](http://ubccpd.ca/sites/ubccpd.ca/files/Accreditation_Learning%20Objectives_%20Verbs.pdf) | |
| **Knowledge:**   1. Demonstrate management of TCA Overdose 2. Demonstrate management of seizures in overdose | |
| **Skills:**   1. Demonstrate EKG interpretation 2. Rapid sequence intubation | |
| **Attitude/Behaviours**   1. Demonstrate Team skills 2. Demonstrate Situational awareness 3. Demonstrate Graded Assertiveness | |
| **Scenario Environment** | |
| **Location** | ED |
| **Monitors** | Telemtry/Crash Cart/defibrillator |
| **Props/Equipment** | IV, Meds  Airway equipment  ECG 1 – Wide complex tachycardia  ECG 2 – SR with terminal AVR upright and slightly wide complex |
| **Make-up/Moulage** | None |
| **Potential Distractors** | None |

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| **Case Introduction:** |
| **Prehospital Notification**  52-year-old male with overdose. Unstable vital signs and altered mental status.  **On Arrival**  HR 160 (wide complex with PVCs). BP 80/40 SaO2 96%. Patient is having generalized Tonic/Clonic Seizures |

| **Patient Parameters** | **Effective Management** | **Notes** |
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| **Phase 1: Tonic Clonic Seizures**  **Condition:** Actively seizing  **Initial Assessment**   * **Heart Rhythm:** Wide complex tachycardia with PVCs * **HR:** 160 * **BP:** 80/40 * **RR:** 20 * **SP02:** 96% and dropping with seizure * **T:** 37.0 * **Chest:** clear * **CNS:** Actively seizing * **Weight:** 70 kg | 1. **Take a focused history** (see Notes column) 2. **Medical Management** 3. **Treat Seizures** – Benzos, Benzos, Benzos,    * If Dilantin is given - ventricular fibrillation due to sodium channel blockade. 4. **Airway intervention** – Rapid Sequence Intubation must be done or patient vomits and aspirates.    * Drugs used----Etomidate, Propofol, Ketamine, Midazolam, Succinylcholine, Rocuronium are OK 5. **Treat Hypotension** – Fluid boluses of 1-2 litres Normal Saline.    * Patient responds minimally.    * Norepinephrine infusion is needed to stabilize BP. 6. **Decontamination** – Orogastric Lavage, activated charcoal, cathartics and whole bowel irrigation are appropriate.)   **Consequences of ineffective management**   * If Dilantin given – ventricular fibrillation (due to sodium channel blockade) * If not intubated – vomits and aspirates | 1. **Focused history**  * Patient is taking Paxil and Amitriptyline for Depression * Had a fight with girlfriend, found one hour later in bedroom by girlfriend drowsy. Admitted to taking entire bottle of his pills in one ingestion approximately 90 minutes prior to arrival in ED.   **PMHx**   * Depression   **Meds**   * Paxil * Amitriptyline   **Allergies**   * NKDA |
| **Phase 2: Ventricular Tachycardia**  **Condition:** Patient’s rhythm becomes ventricular tachycardia with a pulse.  **Physical Examination**   * **Heart Rhythm:** Ventricular Tachycardia * **HR:** 150 * **BP:** 88/56 * **RR:** Intubated and ventilated * **SP02:** 96% * **CVS:** palpable pulse | 1. **Patient Reassessment** (see Notes column)-*Recognizes change in condition* 2. **Medical Management:** 3. **Initiate Sodium Bicarbonate Therapy** - 2 amps of 50meq IV push then 3 amps in 1 litre of D5W at 200cc/hr.    * If not done, rhythm deteriorates into Ventricular Fibrillation and does not return to sinus tachycardia until bicarbonate is given. 4. **Can consider Intralipid** for rescue if not converting or complex not narrowing    * 20% lipid emulsion:      + 1.5 mL/kg as an initial bolus, followed by      + 0.25 mL/kg/min for 30-60 minutes      + Bolus could be repeated 1-2 times for persistent asystole      + Infusion rate could be increased if the BP declines.   **Consequences of ineffective management**   * If Sodium Bicarb not given – rhythm deteriorates into V. Fib and doesn’t return to Sinus Tachy until bicarb given | 1. **Patient Reassessment**   **Airway**   * Protected with ETT   **Breathing**   * Ventilated   **Circulation**   * V. Tach with a pulse |

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

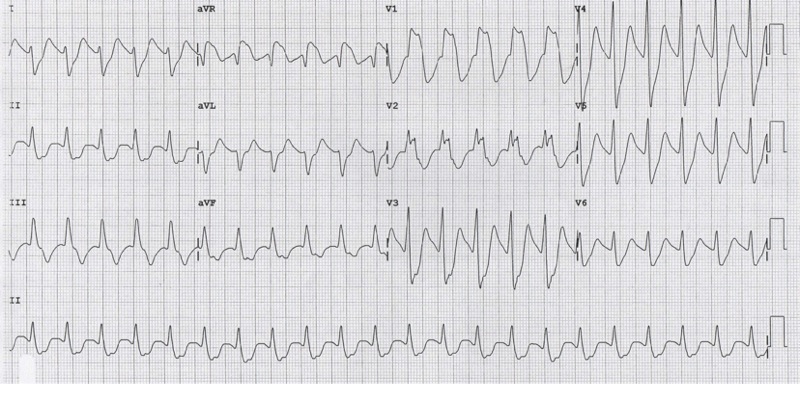
**References:**

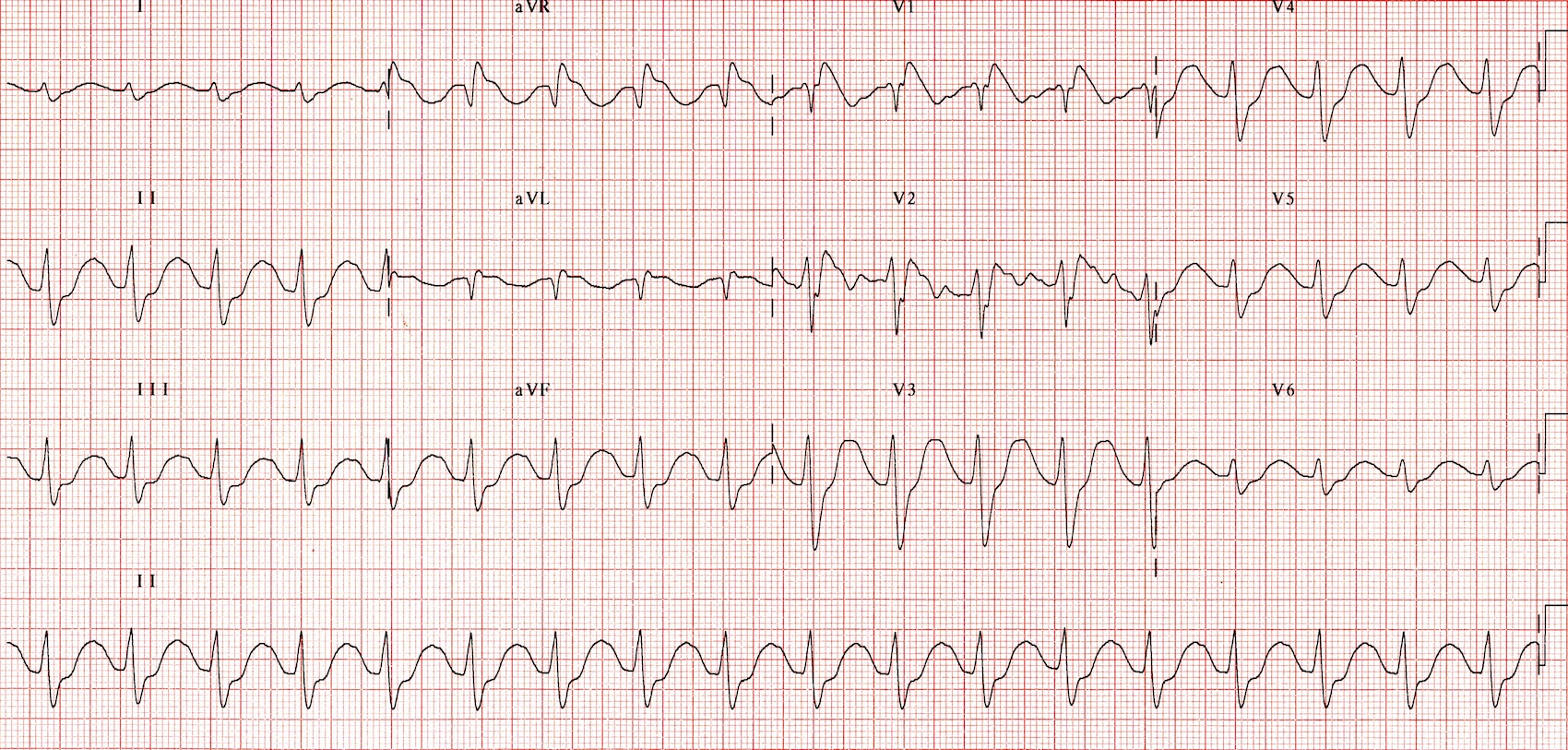
**X-RAYS**

**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**



**EKGs**

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