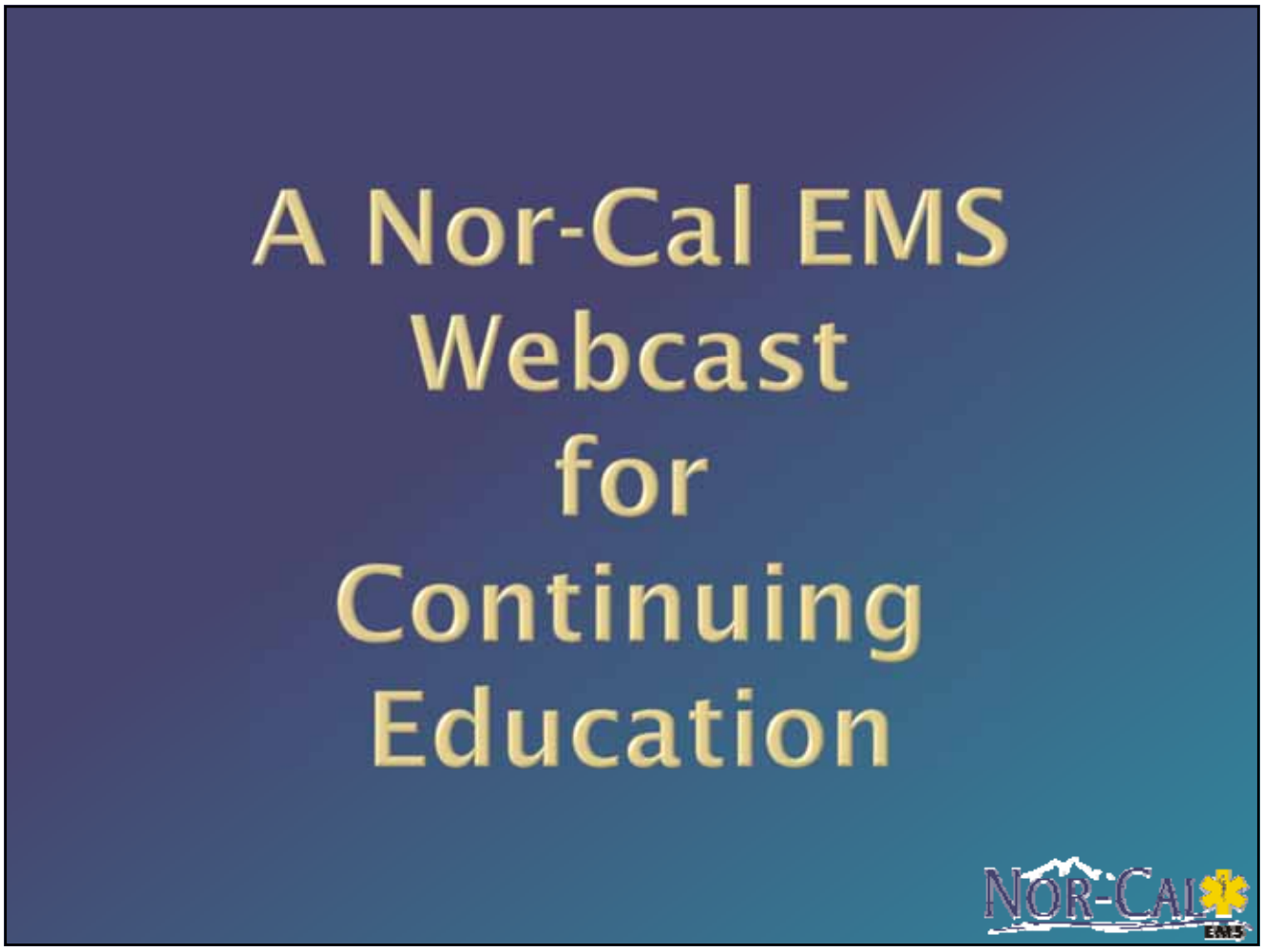
A Nor-Cal EMS Webcast
Nor-Cal EMS Medical Advisory Committee
Run Review December 2015



Presented by Eric Rudnick, MD, FACEP,
FAAEM, Medical Director for Nor-Cal EMS.
Recorded Live on December 8th, 2015
by Engineer Bill Bogenreif

Nor-Cal EMS Medical Advisory Committee Run Review December 8th, 2015

Presented by:

Eric Rudnic, MD, FACEP, FAAEM

Medical Director for Nor-Cal EMS

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Case #1

- Dispatched code 3 to a private residence for a patient experiencing s/s consistent with an unspecified illness/injury. Arrived to find a 21 y/o male patient (~79 kg) sitting upright (floor) with Fire in attendance.
- C/C: Possible syncopal episode. The patient states that he has a history significant for specified neurological pathology (Seizure Disorder). The patient states that approximately 20 minutes ago he experienced what he believes was a syncopal episode.
- He states that he was in his bathroom and then “woke up on the floor”.

Case #1

- He denies striking his head or experiencing a definitive loss of consciousness and is able to recall before-after the event but remains amnestic to the event itself. He states that he consumed a an undetermined amount of ETOH "last night" and also relates a decrease in both his food and fluid intake over the past 24 hours.
- The patient states that he has experienced the aforementioned s/s before but never to this severity. The patient denies any recent trauma, illness, or changes to his diet/medications.
- Also denying any of the following: weakness/lethargy, lightheadedness/dizziness, numbness/tingling, head-neck-back pain/discomfort, shortness of breath/difficulty breathing, chest pain/discomfort, abdominal pain/discomfort, nausea/vomiting, or any other obvious/acute abnormalities.

Case #1

- Airway remains open/patent, breathing remains adequate/non-labored, with symmetric chest rise and fall observed, and no obvious /acute circulatory deficits are observed at present time. Patient remains 4-5-6 for a total GCS of 15, pupils remain PERRLA, and skin remains PWD.
- HEENT remains negative for any obvious/acute anomalies, no JVD is appreciated, and trachea remains midline. Chest wall remains intact with lings sounds clear and equal bilaterally.
- Abdomen remains soft/non-tender, pelvis remains stable, and no incontinence is observed. Posterior remains negative for any obvious/acute anomalies, CSM intact in all extremities, and full ROM is observed throughout.

Case #1

- Patient is moved to stretcher and is transferred into the rear of ambulance without incident. Supplemental oxygen therapy is administered via NC (3 liters/minute) and hemodynamic monitoring is initiated (both continuing for the duration of the transport).
- 12 lead EKG is successfully obtained and remains negative for any obvious/acute anomalies (Sinus Rhythm-successfully transmitted to hospital).
- IV is successfully established in the patient's left AC (14 gauge), corresponding to 1000 ml NS WO rate. BG is successfully obtained during IV establishment.

Case #1

- ED MICN is successfully contacted via radio for patient report (no orders provided). Reassessment continues for the duration of transport.
- Patient is transported code 2 to hospital and is transferred into the care of ED RN without incident. Patient's belongings are left at ED bedside in the care of both the patient and the patient's receiving ED RN. Negative further contact.
- Intake: ~ 1000 ml NS (IVP- saline lock)
- Output 0

Case #1

- Medication allergies: none
- Patient Medications: please see current patient records (current list unavailable at the time of transport).
- PMH: Seizure Disorder/Failure
- Physical Examination: 10:40
- Mental Status: Normal for patient, Oriented person, place, time and events.
- Neuro: Normal
- Eyes: reactive

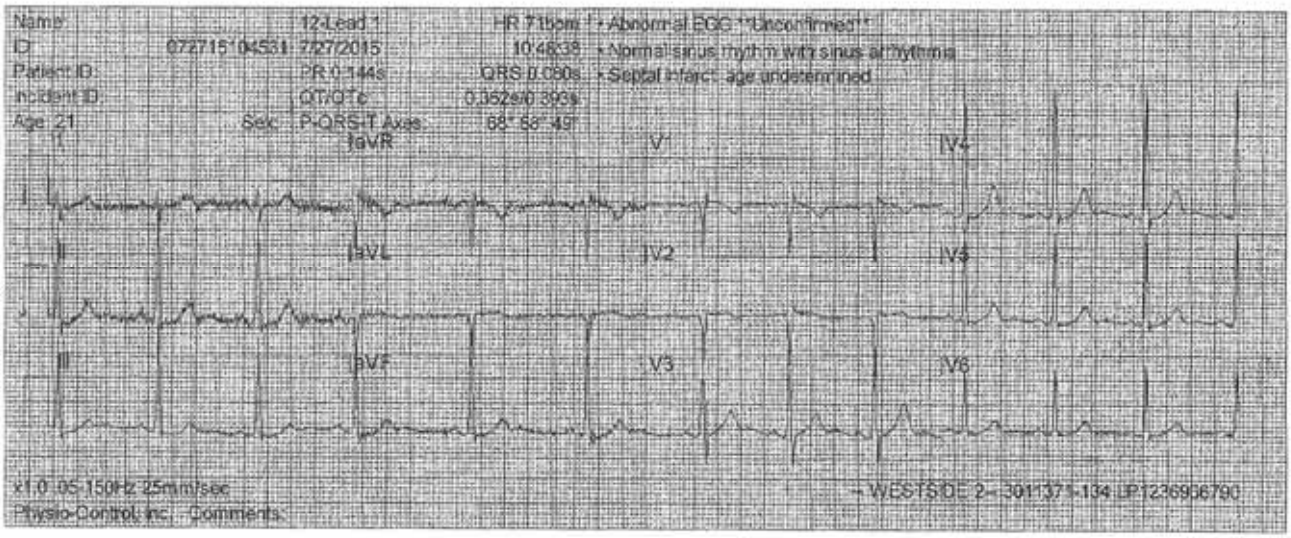
Case #1

- Skin: normal
- Head/Neck: normal
- Chest/Lungs: Normal chest assessment, normal clear and equal breath sounds
- Heart: normal
- LUQ/LLQ/RUQ/RLQ: Normal, soft non-tender
- GU: normal
- Cervical/Thoracic/Lumbar: normal (no pain or deformities)
- Extremities: UR/UL/LR/LL: normal

Case #1

- 10:50 BP 122/64, Pulse 98, RR 20 SaO2: 95% RA, GCS 15,
- 10:50 BG 88
- 10:50 stroke scale negative
- 11:02 BP 126/60, Pulse 90, RR 18, SaO2 100% RA
- 10:40 EKG: Normal sinus rhythm
- 10:51 Venous access extremity
- 11:00 Oxygen by nasal cannula 3 lpm

Case #1



Case #1

- Documentation?
- Quality of care delivered?
- Other issues and concerns?
- Care appropriate?
- Overall impression?
- Protocol changes required?
- Teaching/Take home points

Case #2

- Ambulance responded code 3 for a two vehicle collision. Arrived to find Fire assessing all occupants of vehicles involved and conducting traffic control.
- The two vehicles involved on the right shoulder of the highway. Vehicle one, a Toyota Camry, had damage to the right front of the engine compartment only, airbag deployment, neg deformities to the steering wheel, neg deformities to dash board, neg staring of the windshield, and neg intrusion into the passenger compartment.
- Vehicle two, a Jeep Liberty, had damage to the driver's side front tire, neg damage to the body of the vehicle, neg airbag deployment, neg damage to the steering wheel, neg starring of the windshield, and neg passenger compartment intrusion.

Case #2

- All occupants of vehicle two had no complaint. One pt, driver vehicle one, was found in a by-standers vehicle across the highway on the shoulder. Pt awake and alert, speaking in full sentences, A&OX4, CGS 15, and skin PWD.
- Pt stated she recalled the entire event, denied loss of consciousness, and denied head, neck, and back pain. Pt stated she was traveling towards the city when vehicle two entered the highway from the shoulder to make a U-turn in front of vehicle one.
- Occupants of vehicle one, pt's children, had no complaint. Pt stated she self-extricated from the vehicle, assisted the two other occupants out of the vehicle and walked the two across the street.

Case #2

- Pt stated she was unsure of the speed at which she was traveling at the time of the collision, however the pt stated she was slowing from 55 to 35mph. Pt stated she has recently had an increase in life stressors and stated she has had numerous anxiety attacks over the past two weeks.
- Pt stated she experiences chest pain when she has anxiety attacks.

Case #2

- 29 yo female cc chest pain with a secondary complaint of dizziness and nausea. Pt stated her chest pain feels similar to the chest pain she has experienced over the past two weeks due to her anxiety.
- Pt described her chest pain as an ache and stated that pain did not radiate. Pt stated the pain 7 out of 10 on the pain scale initially.
- Pt stated the pain is located in the center of her chest and slightly to the left. Pt stated the pain increases upon inspiration and the pain increases upon palpation.
- Pt denied HA, visual disturbances, denied weakness, denied numbness, or tingling, stated the dizziness subsided on its own during transport, stated she was having slight difficulty breathing due to the pain, denied abd pain, denied vomiting and diarrhea, and stated was slightly nauseated.

Case #2

- Upon assessment: HEENT clear, trachea midline, neg JVD, neg use accessory muscles, equal chest rise and fall, abrasions noted on the superior aspect pt's chest located inferior to the neck on the left side from the seatbelt.
- Neg deformities on the chest, neg discoloration to the chest, neg flail segment, neg crepitus upon palpation of the ribs and sternum, stable sternum, lungs sounds clear in all fields.
- Abdomen SNT, neg rigidity, neg pain increase upon palpation of the abdomen, pelvis stable, neg incontinence.

Case #2

- Posterior clear, neg pain upon palpation of spine, neck, back, neg deformities to spine, and CSM's intact in all extremities.
- Assessment: Pt stated she could ambulate to the LSU located across the street. Traffic stopped by Fire personnel and pt ambulated across the street with EMS personnel without assistance and without incident.
- Pt's children carried across street by Fire and EMS personnel without incident.
- Pt secured to stretcher in LSU without incident

Case #2

- Vitals, CHP interviewed pt while at scene causing slight delay. The children's father arrived at scene and transported the children to the hospital.
- IV access established and 12 lead obtained. Transported pt code 2 to hospital. Pt refused Zofran for nausea.
- Trending vitals taken en route. Base contact via cell phone without questions or orders.
- Arrived at ED and billing paperwork signed. Pt transferred from main stretcher to facility gurney via draw sheet without incident.
- Transfer of pt care to ED RN.
- No further contact.

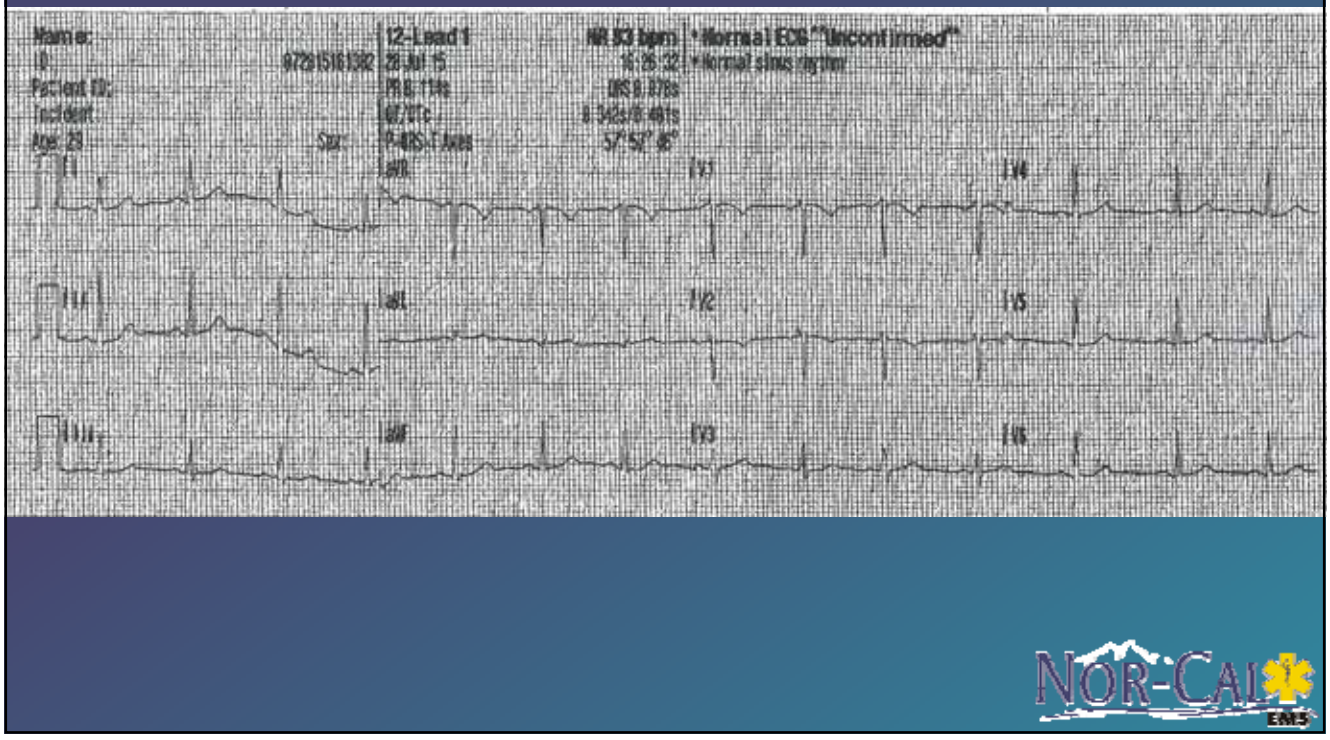
Case #2

- Medication allergies: sulfa
- Medications: Zoloft
- PMH: Anxiety Attacks

Case #2

- 16:05 Mental status: Oriented person, place, time, event
- Neuro: normal
- Skin: warm, capillary nail bed refill less than 3 seconds, dry, color-normal
- Chest/lungs: normal, clear and equal breath sounds, Chest pain/Pressure (reproducible by palp/movement), pain non-radiating

Case #2



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Case #2

- 16:15 BP 103/79, HR 89, RR 24, SaO2 97% RA, GCS 15 pain 7
- 16:20 BP 116/76, HR 105, RR 20, SaO2 100% low O2, GCS 15, pain 7
- 16:25 BP 117/68, HR 90, RR 20, SaO2 99% low O2, GCS 15, pain 6
- 16:32 BP 105/69, HR 85, RR 20, SaO2 97% low O2, GCS 15, pain 6
- 16:40 BP 110/75, HR 86, RR 20, SaO2 98% low O2, GCS 15, pain 6

Case #2

- 16:26 EKG Normal Sinus Rhythm
- 16:22 Venous access left AC, 20 gauge
- 16:19 Oxygen by Nasal Cannula 3 lpm

Case #2

- Documentation?
- Quality of care delivered?
- Other issues and concerns?
- Care appropriate?
- Overall impression?
- Protocol changes required?
- Teaching/Take home points

Case #3

- Dispatched for an unresponsive 64 male with CPR in progress. EMS responds code 3.
- On arrival EMS finds patient lying with Fire in attendance. Fire initiated CPR.
- Police officer states that he was at scene with pt doing a welfare check. He states that pt was sitting on the ground in the building where he is appears he is living.
- Extremely ETOH and complaining of being weak. He states that pt was alert and refusing help, he convinced the pt to be taken to the hospital.

Case #3

- As he was notifying dispatch to have an ambulance respond the pt became unresponsive. , pt still had pulse and responded to sternal rub at this time.
- As Fire arrived pt became pulseless and CPR was initiated. Per Fire they shocked the pt one time with their AED prior to ESM arrival.
- CPR and ventilations via BVM continued, pt transferred to the gurney and to the ambulance without incident.

Case #3

- C/C pulseless. TX: pt placed on cardiac monitor as noted. IO established as noted.
- Medications administered as noted. Venitlations assisted with BVM 15 lpm.
- PE:HEENT clear, PERRL. Skin: pale, warm, dry, Neck: intact. Back: intact.
- Lungs: equal chest rise with ventilations, Abdomen: intact, Extremities: intact.
- No acute changes noted during transport.

Case #3

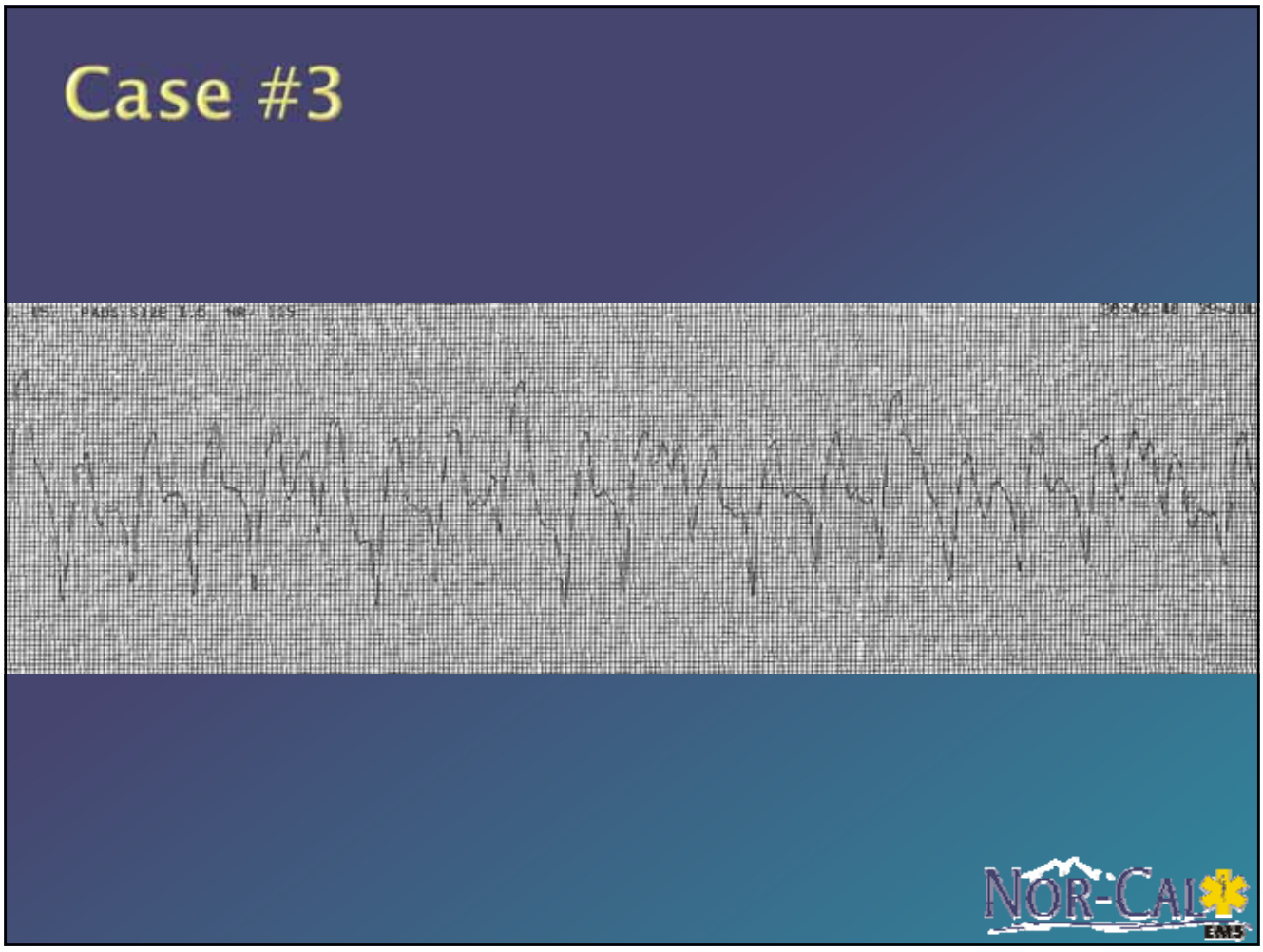
- Hospital contacted with report and ETA.
- On arrival to hospital pt transferred to bed without incident.
- Pt care report given to Dr and RN.
- No belongings accompanied pt.

Case #3

- Prior Aid: AED, CPR, and Positive Pressure Ventilation
- Medications: unable to determine
- Allergies: Unable to determine
- PMH: Substance abuse

Case #3

- 20:46 Mental status: unresponsive, Neuro not applicable, Skin pale
- 20:46 BP 0, HR 0, RR 0, GCS 3
- 20:46 Defibrillation, pads, ECG Interpretation: agonal/idioventricular
- 20:49 Epinephrine, 1:10,000 IO, Dose 1 mg
- 20:49 Defibrillation, pads, ECG Interpretation: agonal/idioventricular
- 20:53 Defibrillation, pads, ECG Interpretation: agonal/idioventricular
- 20:54 Dextrose 50%, IO, 25 gms
- 20:54 Epinephrine 1:10,000 IO, 1 mg



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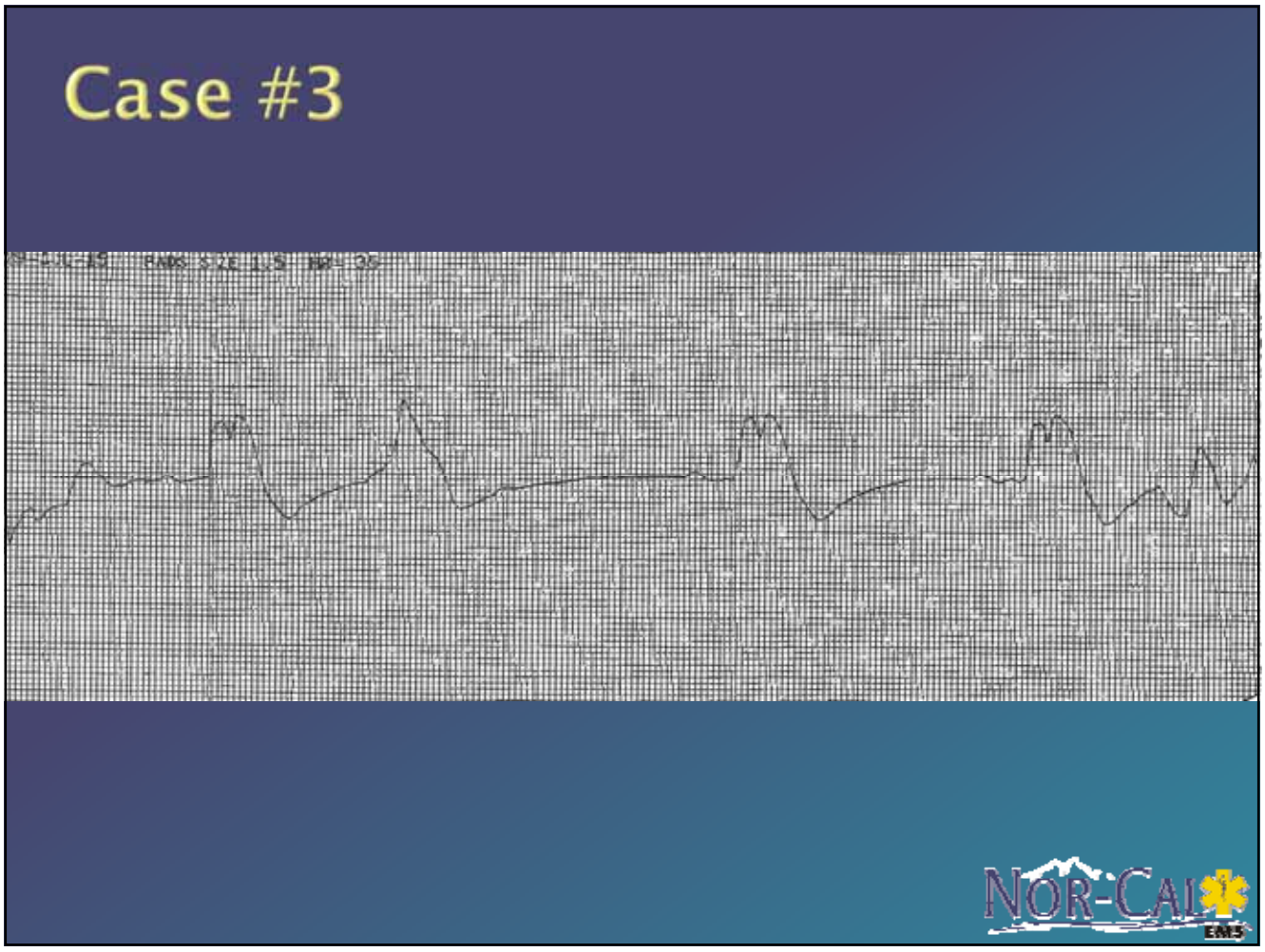

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Case #3

- Documentation?
- Quality of care delivered?
- Other issues and concerns?
- Care appropriate?
- Overall impression?
- Protocol changes required?
- Teaching/Take home points

Case #4

- Dispatched code 3 for an unresponsive female at a private residence. Upon arrival found pt sitting in the drivers seat of her vehicle parked in front of apartment (Mom's apartment) in care of Fire personnel and family.
- Pt was normal color, warm, and dry with a GCS of 7 (eyes opening to painful stimuli, no verbal response, pt withdrawing from painful stimuli). Family stated pt arrived at Mom's apartment a little after 9:00.
- Family stated pt was acting confused on her arrival. Family stated pt went out to her car and sat in the drivers seat, family stated pt had slumped out of the drivers seat onto the ground striking her head on the asphalt next to the vehicle.

Case #4

- Family stated pt had an episode of vomiting just prior to falling out of the vehicle (approximately 20-30 ml of fluid on the asphalt next to the vehicle). Family stated they checked on pt and pt was not responding to them so they contacted EMS.
- Family did not state how pt got back into the driver seat of the vehicle.

Case #4

- Pt tach was midline with no JVD or accessory muscle use, Chest had equal rise and fall bilaterally with good tidal volume and clear lung sounds. Pt abd was soft with no response to palpation.
- Pelvis was stable and intact. Distal extremities had good pulses and cap refill. Pt appeared to use her left side extremities without effort.
- Right arm with attempt to move painful stimuli only if left arm was unable to due to EMS holding it for procedures.
- Pt's right foot appeared to be contracted inward and down and did not respond to painful stimuli (upon arrival to hospital pt moved right leg when physician applied painful stimuli).

Case #4

- Pt had approximately 2 inch diameter abrasion/contusion to left side of forehead above eyebrow at pt's hairline. Pt had abrasion/contusion to knees bilaterally approximately 1 inch diameter.
- Initial assessment done while pt was sitting in vehicle. Pt was lifted by EMS and Fire personnel to stretcher. Pt was loaded into LSU and vitals obtained.
- Pt assessment completed, 4 lead ECG was placed on pt, pt placed on oxygen at 4 lpm. IV access was attempted in left AC without success.
- Blood glucose obtained from IV attempt. IV access was obtained in pt's left hand/wrist with 18 gauge catheter and macro drip tubing attached to Normal Saline TKO.

Case #4

- Size 28 NPA was attempted to be placed in pt's left nostril without success due to pt reaching up and pulling at EMS and NPA. Pt had an approximately 20-40 second episode of consciousness after NPA attempt.
- Pt denied any drug usage, pt denied any recent illness, pt denied any pain currently. Pt spoke quietly but answered questions with appropriate responses . No slurring of words. No inappropriate words or confused speech (very limited questions due to short period of consciousness).
- Pt transported code 3 in supine position without incident.

Case #4

- 12 lead ECG obtained. Pt administered 2 mg Naloxone with no change noted. Pt report given via telephone with no questions or orders given.
- Pt had a second episode of consciousness enroute to hospital, pt was able to give her name and birth date. Pt denied any medications.
- Pt unable to answer place or events prior to unresponsiveness. Pt again denied any pain. Pt stated she felt cold then went unresponsive (responsive to painful stimuli but non-verbal).
- Pt blood pressure on NIBP went extremely high, attempted to auscultate without success.

Case #4

- Attempted to palpate with questionable results due to weak radial pulses and vehicle vibration, BP upon arrival was consistent with initial pressures.
- EMS attempted to change arms and locations with NIBP with results remaining to be inconsistent with pulses and pt presentation.
- Secondary 12 lead ECG obtained with no change. Pt care was transferred to RN and Physician at hospital and report given.
- Pt transferred to hospital bed using draw sheet without incident.
- No further pt contact.

Case #4

- Medications: unknown
- Allergies: unknown
- PMH: unknown
- 10:06 mental status responsive to painful stimuli, intermittent consciousness, pt was responsive to pain, pt had two episodes of consciousness while in care of EMS
- Eyes: Right 6 mm, fixed and non-reactive L 6 mm, fixed and non-reactive
- Skin: normal

Case #4

- Head/Face: abrasion, 2 inch diameter abrasion/contusion to forehead above left eyebrow at the hairline
- Neck: normal
- Chest/lungs: Normal chest assessment, normal clear and equal breath sounds
- Heart: normal
- LUQ/LLQ/RUQ/RLQ: normal (soft, non-tender)
- GU: normal
- Cervical: normal, no pain or deformity

Case #4

- Thoracic and Lumbar: normal, no pain or deformity
- Extremities: Upper right: normal, Upper left: normal, Lower right: normal, pain/tenderness contusion to right patella approximately 1 inch diameter, Lower left: normal, pain/tenderness, multiple contusion/abrasion to patella approximately 1-2 inch diameter.

Case #4

- 10:10 BP 98/60, HR 58, RR 16, SaO2 94% RA, GCS 7
- 10:11 ECG monitor Sinus Bradycardia
- 10:12 Oxygen via nasal cannula
- 10:14 Venous access
- 10:17 Venous access
- 10:17 BP 102/57, HR 52, RR 16, SaO2 96% low O2, GCS 7
- 10:20 12 lead ECG Sinus Bradycardia

Case #4

- 10:22 BP 102/38, HR 62, RR 16, SaO2 96% low O2, GCS 7
- 10:22 Blood glucose 102
- 10:22 Narcan IV 2 mg
- 10:29 BP 258/162, HR 66, RR 16, SaO2 98% low O2, GCS 7
- 10:32 12 lead ECG Sinus Bradycardia
- 10:35 BP 209/173, HR 83, RR 16, SaO2 98% low O2, GCS 7
- 10:41 BP 110/47, HR 58, RR 16, SaO2 97% low O2, GCS 8
- 10:43 care turned over

Case #4

- Documentation?
- Quality of care delivered?
- Other issues and concerns?
- Care appropriate?
- Overall impression?
- Protocol changes required?
- Teaching/Take home points