Bearamedics EKG Test

SLO County EMS Protocols — Rhythm Interpretation & Treatment · 45 Questions

Name: _____ Date: _____ Score: _____ / 45

Choose the single best answer. Treatment answers follow current San Luis Obispo County EMS protocols (600–720 series). All strips are Lead II at 25 mm/s, 10 mm/mV.

Section A — Rhythm Identification

1. Identify the rhythm.

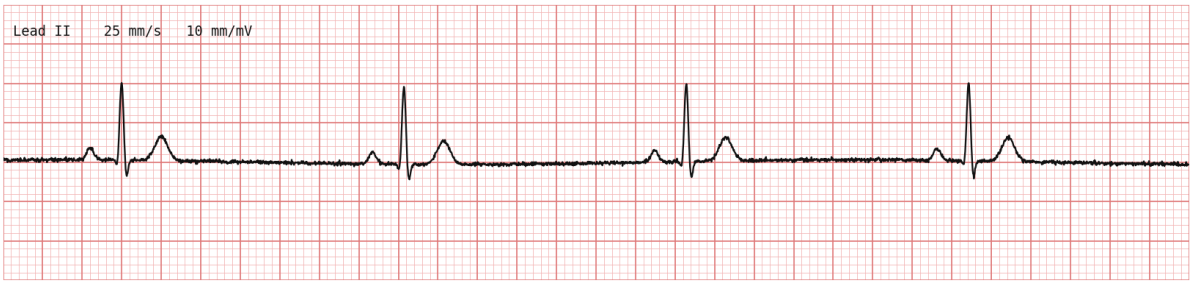
A. Sinus tachycardia

B. Junctional rhythm

C. Normal sinus rhythm

D. Atrial fibrillation

2. Identify the rhythm.



A. Sinus bradycardia

B. First-degree AV block

C. Junctional rhythm

D. Idioventricular rhythm

3. Identify the rhythm.

A. Ventricular tachycardia

B. SVT

C. Sinus tachycardia

D. Atrial flutter

4. Identify the rhythm.

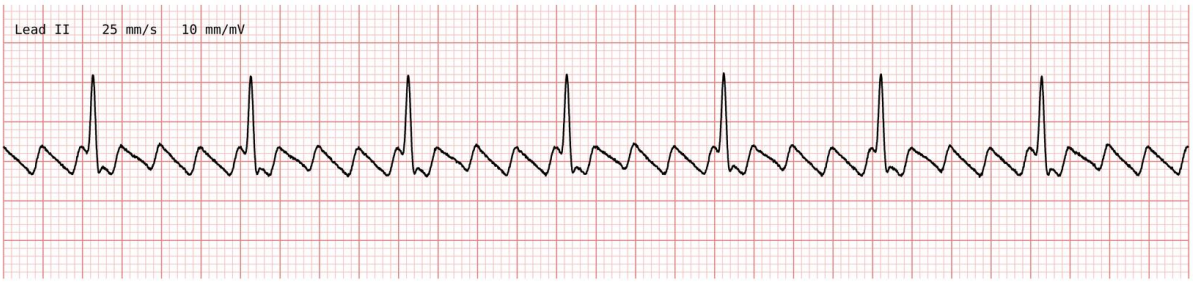
A. Multifocal atrial tachycardia

B. Sinus arrhythmia

C. Atrial flutter

D. Atrial fibrillation

5. Identify the rhythm.



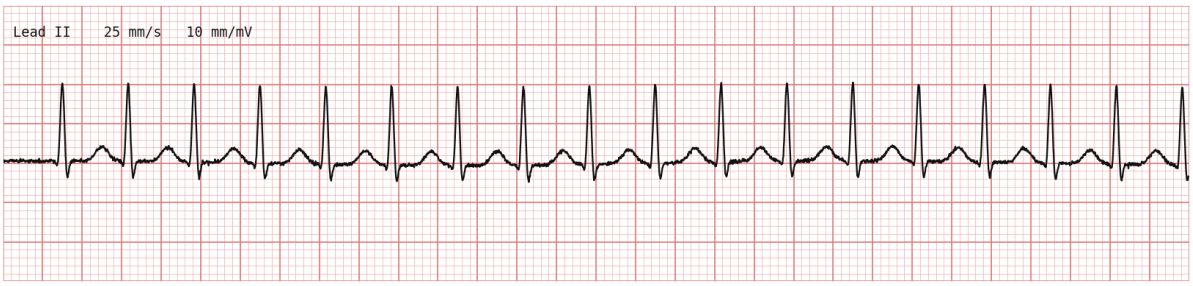
A. Atrial flutter

B. SVT

C. Sinus tachycardia

D. Atrial fibrillation

6. Identify the rhythm.



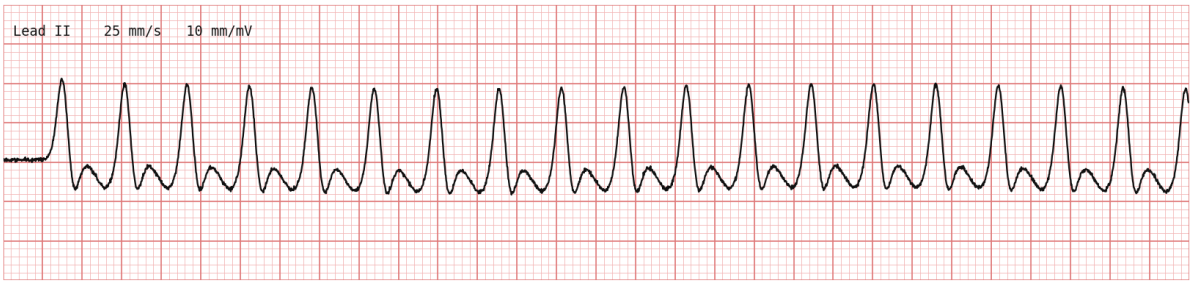
A. Sinus tachycardia

B. Ventricular tachycardia

C. Atrial fibrillation

D. SVT (narrow-complex tachycardia)

7. Identify the rhythm.



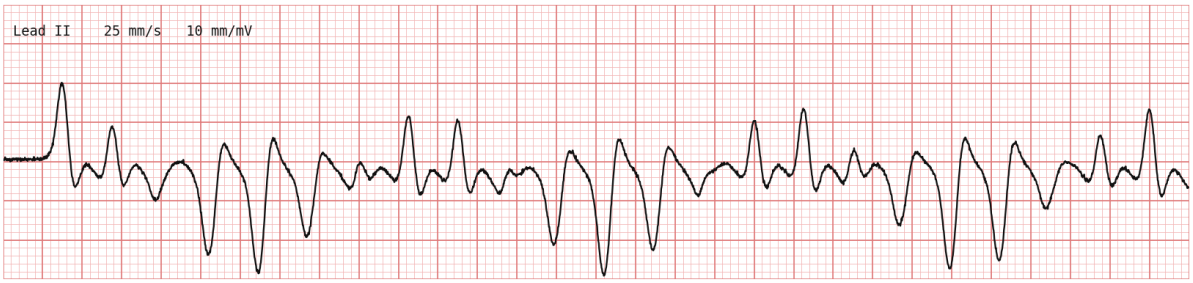
A. Atrial flutter

B. Accelerated idioventricular rhythm

C. Monomorphic ventricular tachycardia

D. SVT with aberrancy

8. Identify the rhythm.



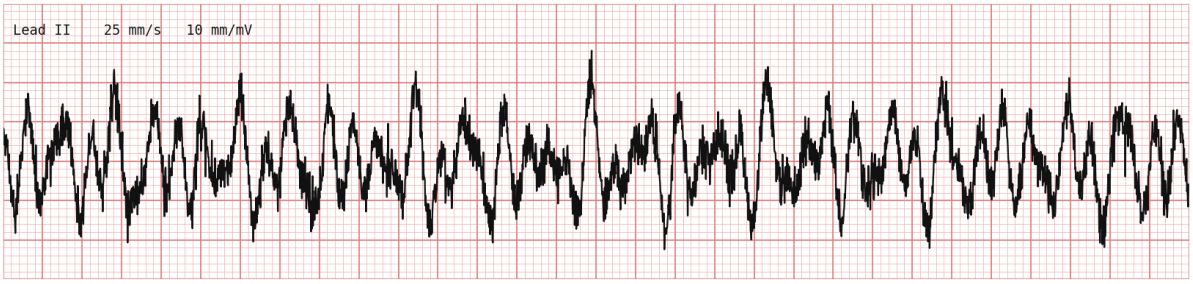
A. Ventricular fibrillation

B. Monomorphic VT

C. Motion artifact

D. Polymorphic VT (Torsades de Pointes)

9. Identify the rhythm.



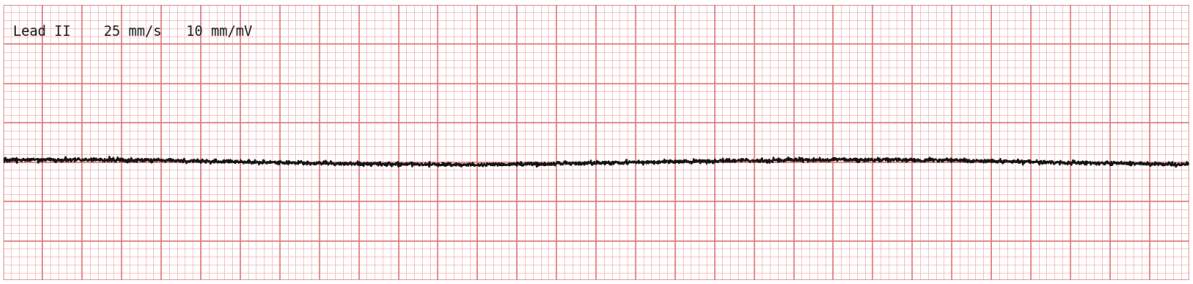
A. Coarse artifact

B. Ventricular fibrillation

C. Asystole

D. Polymorphic VT

10. Identify the rhythm.



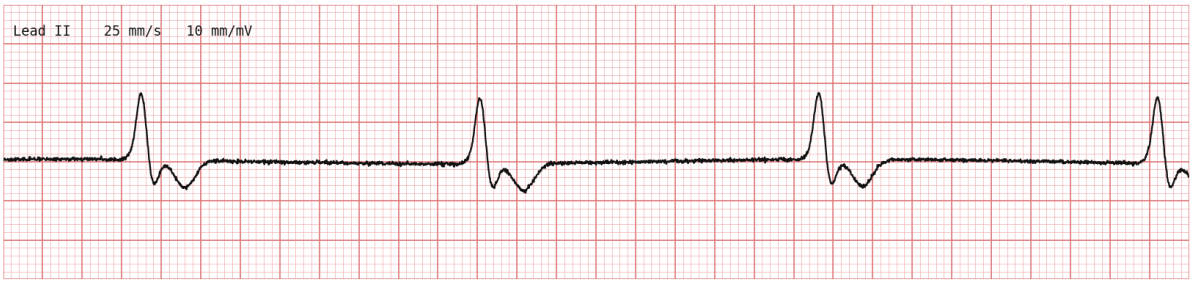
A. Pulseless electrical activity

B. Asystole

C. Fine ventricular fibrillation

D. Idioventricular rhythm

11. Identify the rhythm.



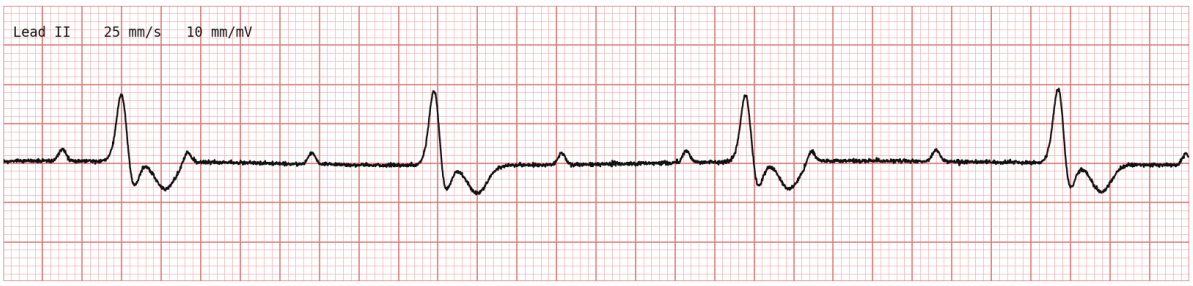
A. Junctional rhythm

B. Ventricular tachycardia

C. Idioventricular (ventricular escape) rhythm

D. Third-degree AV block

12. Identify the rhythm.



A. Third-degree (complete) AV block

B. Second-degree Type II

C. Sinus brady with first-degree block

D. Second-degree Type I

13. Identify the rhythm.

A. Second-degree AV block, Type I (Wenckebach)

B. Third-degree AV block

C. Second-degree Type II

D. First-degree AV block

14. Identify the rhythm.

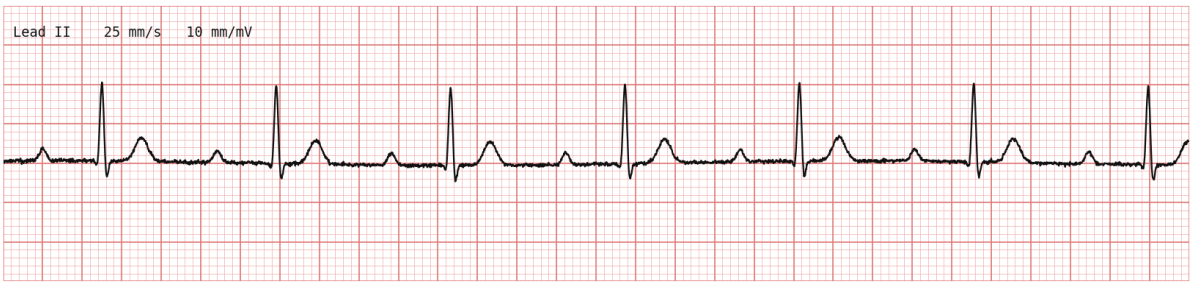
A. Second-degree AV block, Type II

B. Third-degree AV block

C. Atrial flutter with variable block

D. Second-degree Type I (Wenckebach)

15. Identify the rhythm.



A. Junctional rhythm

B. First-degree AV block

C. Normal sinus rhythm

D. Second-degree Type I

16. Identify the rhythm.

A. Atrial bigeminy

B. Ventricular bigeminy (PVCs)

C. Ventricular tachycardia

D. Paced rhythm

17. Identify the rhythm.

A. Junctional rhythm

B. Idioventricular rhythm

C. First-degree AV block

D. Sinus bradycardia

18. Identify the rhythm.

A. SVT

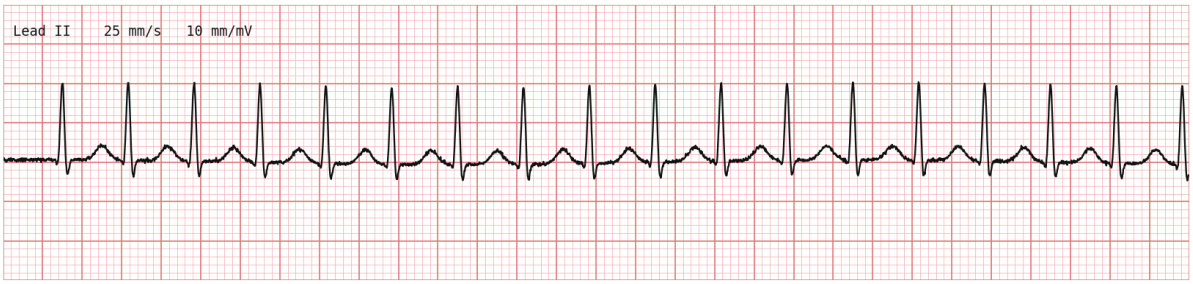
B. Atrial flutter

C. Atrial fibrillation with RVR

D. Sinus tachycardia

Section B — Strip Plus Clinical Context: Treatment

19. 28 y/o, palpitations, HR 190, BP 118/74, alert, no chest pain or dyspnea. Vagal maneuvers fail. Per SLO County SVT Protocol #642, the next step is:



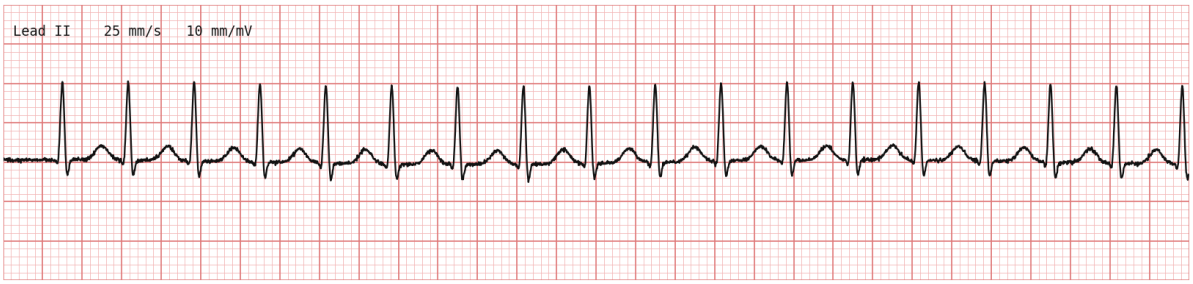
A. Adenosine 6 mg rapid IV followed by a 20 mL NS bulus

B. Synchronized cardioversion at 50 J

C. Adenosine 12 mg IV with no flush

D. Amiodarone 150 mg IV over 10 minutes

20. Same patient — the 6 mg dose with flush did not convert the rhythm. Per #642, next is:



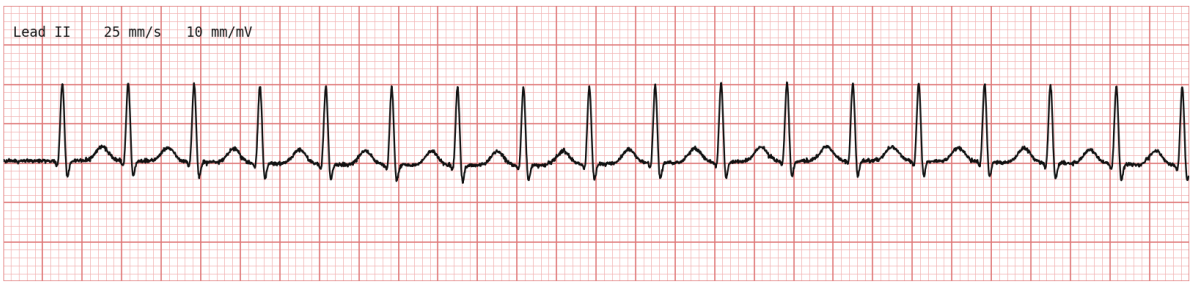
A. Adenosine 18 mg IV

B. Repeat Adenosine 6 mg

C. Adenosine 12 mg IV + 20 mL NS bolus, may repeat once

D. Proceed straight to synchronized cardioversion

21. Different patient — SVT at 200, BP 70/40, diaphoretic and altered (unstable). Per #642:



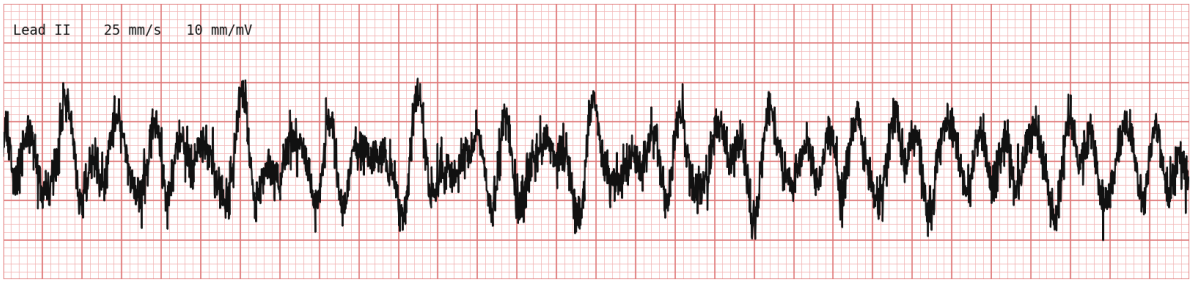
A. Amiodarone 150 mg drip

B. Defibrillate (unsynchronized) at 200 J

C. Synchronized cardioversion; may give Midazolam up to 2 mg slow IV or 5 mg IN to pre-medicate

D. Adenosine 6 mg, then 12 mg

22. Adult, unresponsive, pulseless, this rhythm on the monitor. Per Cardiac Arrest Protocol #641, the first electrical therapy is:



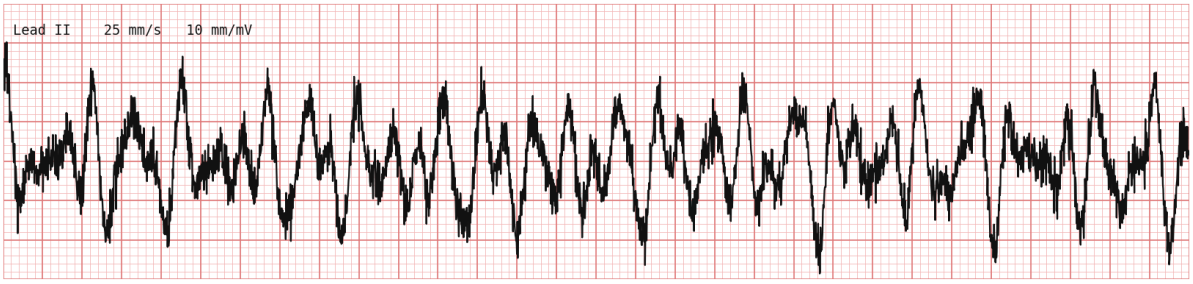
A. Defibrillate at the maximum manufacturer setting, then resume CPR immediately

B. Synchronized cardioversion at 200 J

C. Synchronized cardioversion at 120 J

D. Transcutaneous pacing at 80 bpm

23. Same arrest, refractory VF after shocks. Per #641, the first antiarrhythmic and dose is:



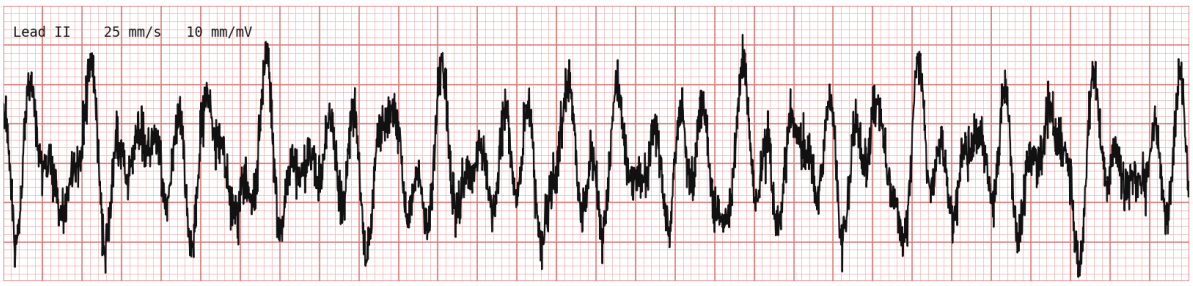
A. Lidocaine 1 mg/kg IV/IO

B. Epinephrine 1:1,000 1 mg IM

C. Amiodarone 300 mg IV/IO push (refractory dose 150 mg after 5 min)

D. Amiodarone 150 mg IV/IO push

24. Same arrest — epinephrine dosing per #641 is:



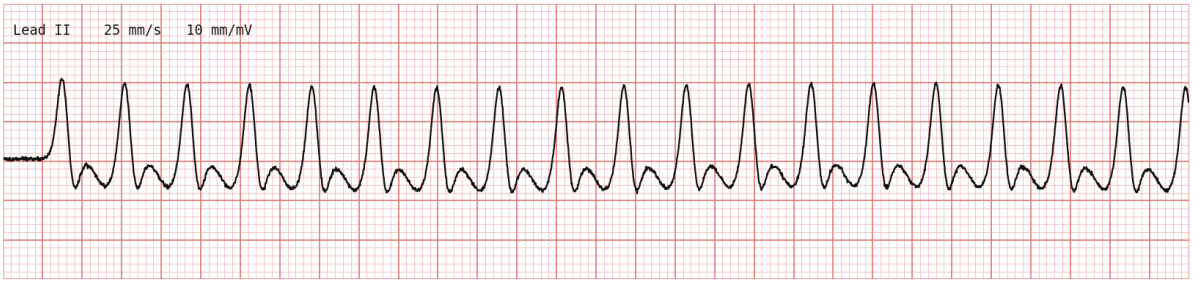
A. Epinephrine 1:10,000 1 mg IV/IO every 3–5 min; not during the first cycle of CPR

B. Push-dose Epinephrine 10 mcg/mL

C. Epinephrine 1:10,000 1 mg IV/IO every cycle, including the first

D. Epinephrine 1:1,000 1 mg IM every 5 min

25. 56 y/o, HR 190 wide and regular, BP 132/80, alert with mild palpitations only (stable). Per VT-with-Pulses Protocol #643:



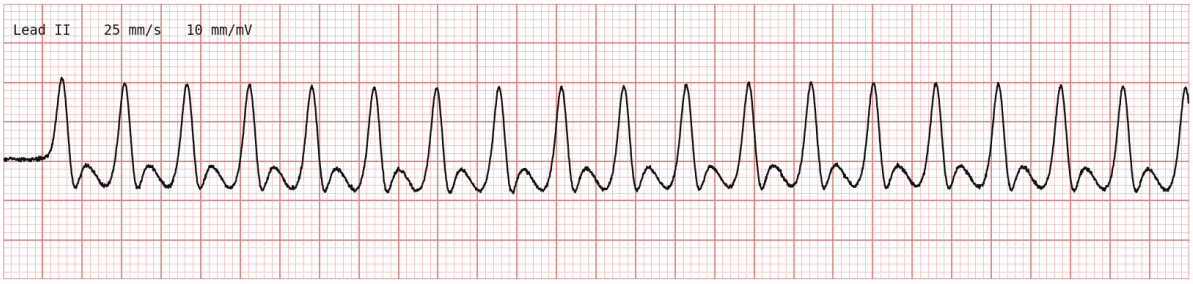
A. Adenosine 6 mg IV

B. Amiodarone 300 mg IV push

C. Synchronized cardioversion at 100 J

D. Amiodarone 150 mg IV/IO drip over 10 min; refractory 150 mg (max 300 mg)

26. Same rhythm, now BP 74/40, altered, chest pain (unstable). Per #643:



A. Adenosine 12 mg IV

B. Amiodarone 150 mg IV push

C. Synchronized cardioversion; consider Midazolam to pre-medicate

D. Defibrillate at the maximum setting

27. 68 y/o, HR 40, BP 78/50, ALOC, cool and diaphoretic. Per Symptomatic Bradycardia Protocol #644 (unstable), first-line is:

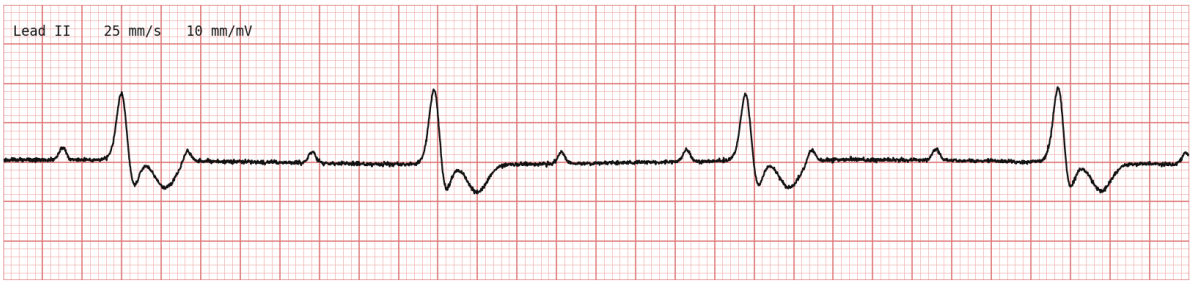
A. Atropine 1 mg IV push

B. Immediate TCP without a trial of atropine

C. Epinephrine 1:10,000 1 mg IV push

D. Atropine 0.5 mg IV, repeat q3–5 min to max 3 mg; NS 500 mL bolus concurrently

28. Syncope, HR 38, wide complexes, BP 76/44, ALOC — high-degree block with wide QRS, poor response to atropine. Per #644, the indicated intervention is:



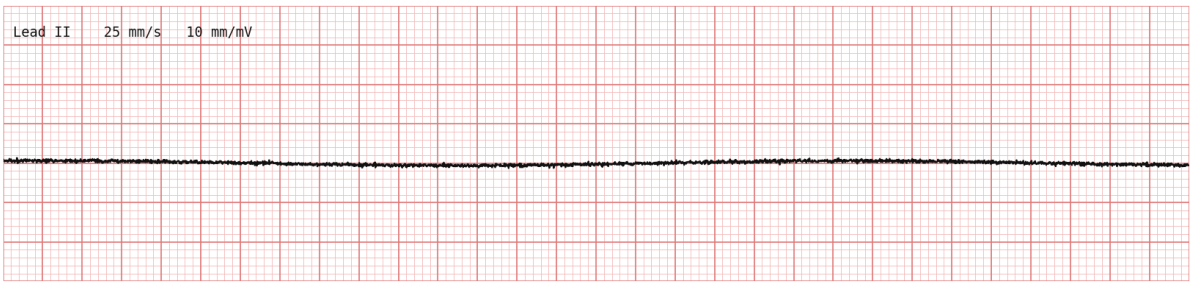
A. Atropine 1 mg IV push

B. Transcutaneous pacing (Procedure #716)

C. Adenosine 6 mg IV

D. Amiodarone 150 mg drip

29. Unresponsive, pulseless, this rhythm confirmed in two leads. Per #641:



A. HPCPR + Epinephrine 1:10,000 1 mg IV/IO q3–5 min; treat reversible causes — no shock, no antiarrhythmic

B. Defibrillate at the maximum setting

C. Atropine 1 mg IV

D. Synchronized cardioversion

30. 70 y/o, irregularly irregular ~150, BP 128/78, mild palpitations, no instability (stable A-fib RVR). Per A-Fib with RVR Protocol #645:

A. Adenosine 6 mg IV

B. Synchronized cardioversion at 200 J

C. Observe and monitor the patient

D. Diltiazem 0.25 mg/kg IV

31. Same rhythm but BP 74/40, altered, pulmonary edema (unstable). Per #645:

A. Adenosine 12 mg IV

B. Unsynchronized cardioversion

C. Consult the Base Hospital

D. Standing-order Diltiazem

32. Same patient deteriorates to peri-arrest / extremis. Per #645:

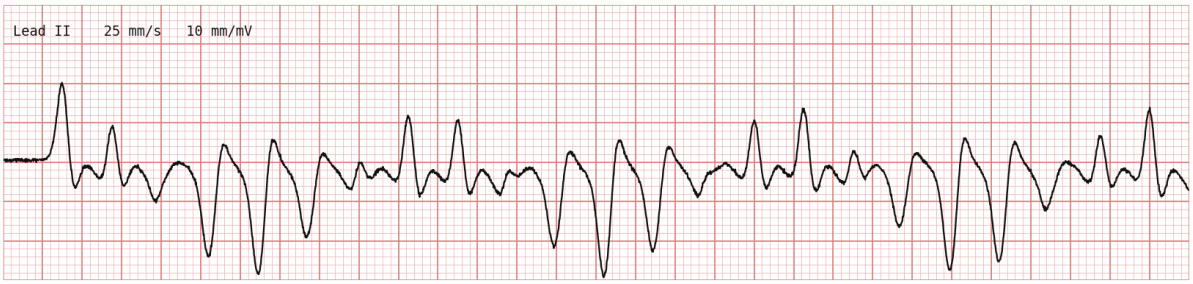
A. Adenosine 6 mg then 12 mg

B. Synchronized cardioversion at 200 J; consider Midazolam up to 2 mg IV / 5 mg IN to pre-medicate

C. Amiodarone 300 mg push

D. Defibrillate (unsynchronized) at maximum

33. Wide, twisting polymorphic VT with pulses; patient unstable. Per #643 notes, the correct cardioversion is:



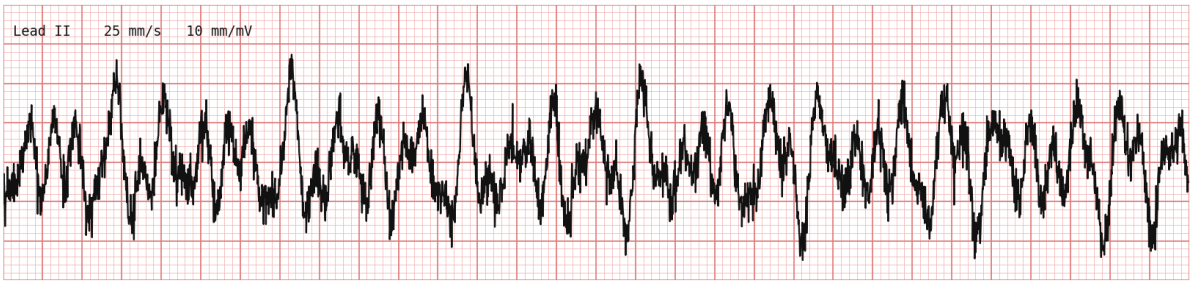
A. Synchronized cardioversion at 100 J

B. Unsynchronized cardioversion starting at 120 J

C. Synchronized cardioversion at 50 J

D. Defibrillate at max only after three failed sync attempts

34. 6-year-old, ~22 kg, pulseless, this rhythm. Per #641 (pediatric), the first defibrillation energy is:



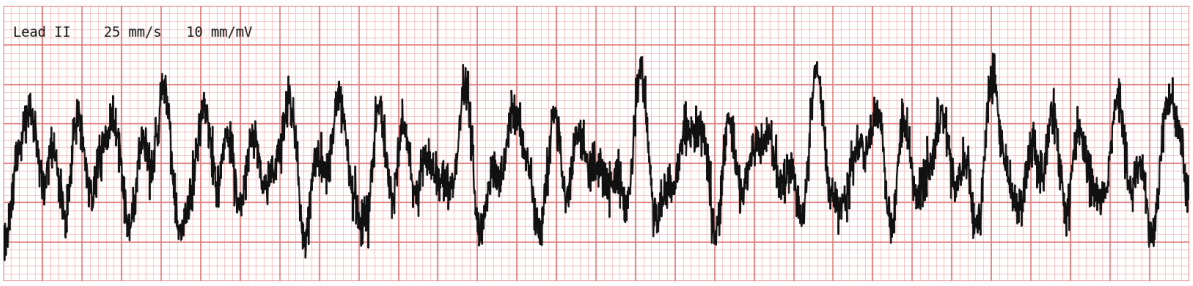
A. 200 J fixed

B. 2 J/kg, then 4 J/kg on the subsequent shock

C. 1 J/kg

D. Maximum manufacturer setting

35. Same pediatric arrest — epinephrine per #641 is:



A. Epinephrine 1:10,000 0.01 mg/kg (0.1 mL/kg) IV/IO, max 0.3 mg, q3–5 min

B. Epinephrine 1:1,000 0.01 mg/kg IM

C. Epinephrine 1 mg IV/IO q3–5 min

D. Epinephrine 1:10,000 0.1 mg/kg IV/IO

36. Cardiac arrest with ROSC; organized rhythm restored but BP 78/44 (persistent hypotension). Per #641 ROSC with hypotension:

A. Epinephrine 1:10,000 1 mg IV push

B. Atropine 0.5 mg IV

C. Amiodarone 150 mg IV

D. Push-dose Epinephrine 10 mcg/mL, 1 mL IV/IO q1–3 min, titrated to SBP > 90

Section C — Integrated Field Scenarios

37. 58 y/o crushing chest pain, diaphoretic. 12-lead shows ST-elevation in II, III, and aVF. BP 96/60. Rhythm strip below. Which best reflects SLO County management (Protocol #640)?

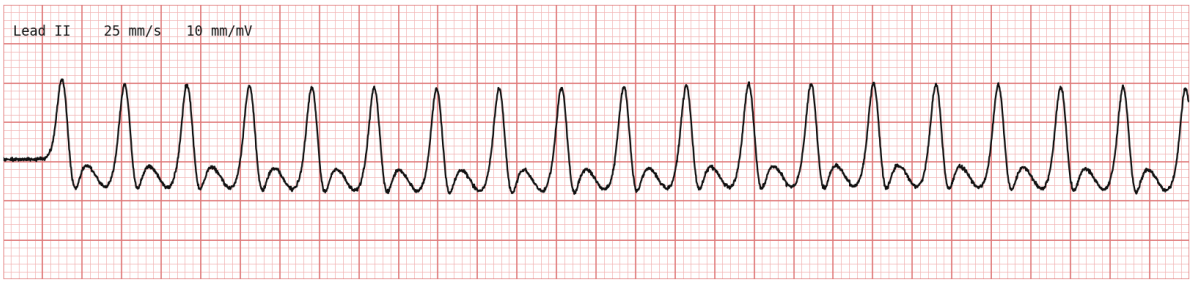
A. Give NTG 0.4 mg SL immediately, regardless of blood pressure

B. Give Fentanyl 100 mcg IV first, before aspirin

C. Withhold aspirin because the systolic pressure is low

D. ASA 162 mg chewable, obtain/transmit the 12-lead and initiate a STEMI Alert to French; evaluate V4R for RVI and hold nitroglycerin if RVI or hypotension is present

38. 62 y/o, palpitations progressing to near-syncope; wide regular tachycardia ~180, BP 70 by palpation, cool and confused. Best action?



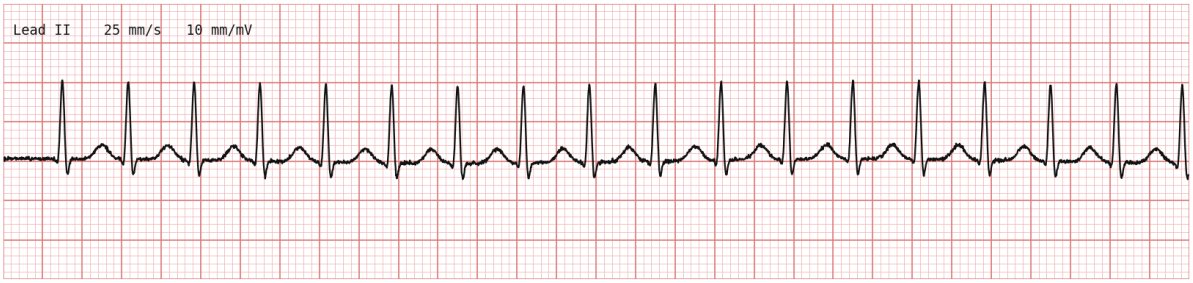
A. Defibrillate (unsynchronized) at the maximum setting

B. Adenosine 6 mg, then 12 mg

C. Amiodarone 150 mg over 10 minutes

D. Sedate with Midazolam and perform synchronized cardioversion (#643 unstable VT)

39. 24 y/o sudden palpitations, HR 190 narrow and regular, BP 120/78, no chest pain or dyspnea, mentating normally. Best initial sequence?



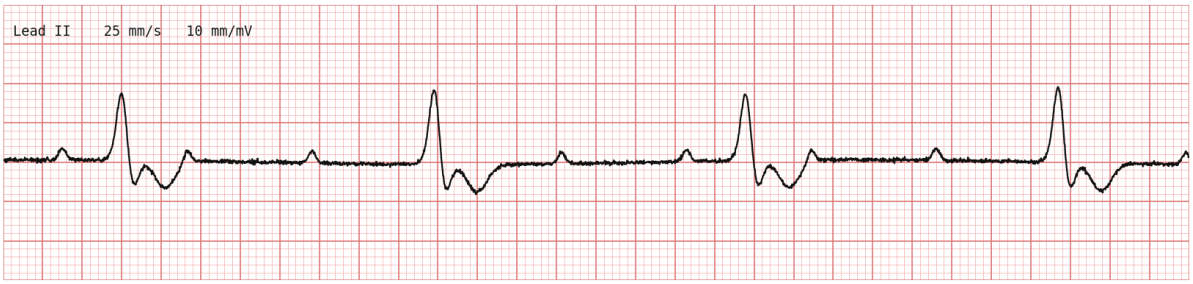
A. Diltiazem 0.25 mg/kg IV

B. Amiodarone 150 mg drip

C. Vagal maneuvers, then Adenosine 6 mg + 20 mL flush, then 12 mg + flush (#642 stable)

D. Immediate synchronized cardioversion

40. 78 y/o syncope, HR 38 with a wide escape and AV dissociation, BP 74/40, ALOC and cool. Atropine is unlikely to help. Best action?



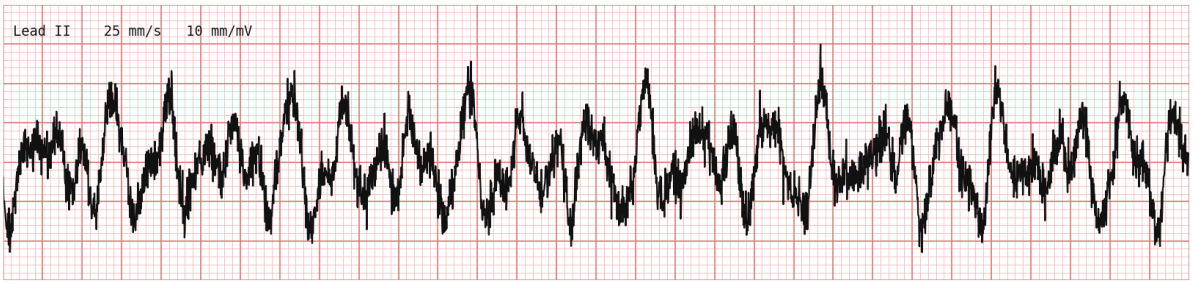
A. Amiodarone 150 mg drip

B. Begin transcutaneous pacing (#716): set rate ~80, increase output until mechanical capture; manage pain per #603

C. Atropine 1 mg push, then reassess

D. Epinephrine 1:10,000 1 mg IV push

41. Witnessed adult VF arrest. After two shocks + CPR + epinephrine, the patient remains in VF following the 3rd shock. Per #641, what should the team consider next (besides continued CPR / epi / amiodarone)?



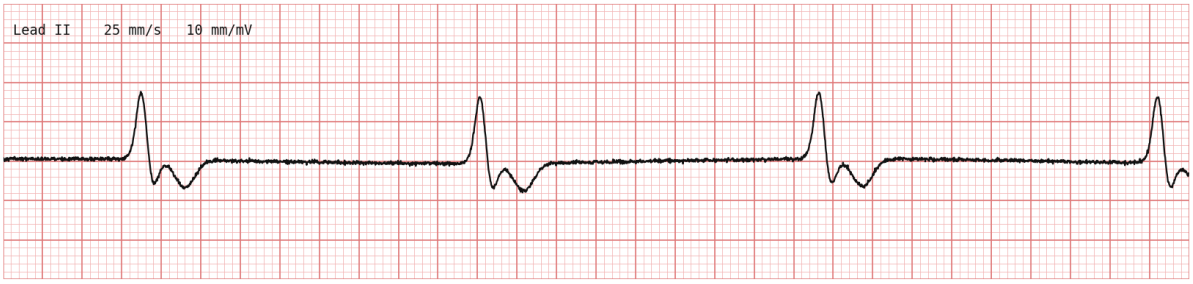
A. Synchronized cardioversion

B. Transcutaneous pacing

C. Vector-change defibrillation (switch pad position anterior-lateral ↔ anterior-posterior)

D. Immediate transport without further shocks

42. Intentional tricyclic overdose, lethargic, wide-complex bradycardia (QRS > 0.12 s), HR 50, BP 88/54. Per #614/#644, the key pharmacologic intervention for the wide QRS is:



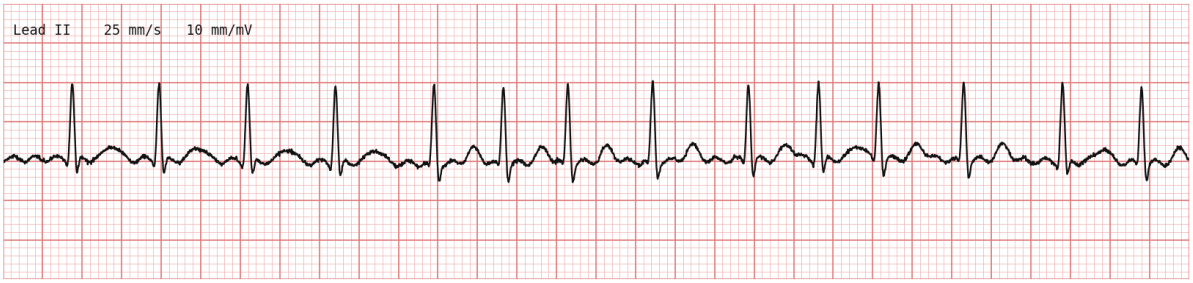
A. Amiodarone 150 mg IV

B. Sodium Bicarbonate 1 mEq/kg IV/IO, may repeat q10 min at ½ dose for persistent wide QRS

C. Calcium Chloride 1 g IV/IO

D. Adenosine 6 mg IV

43. 72 y/o, palpitations for 3 hrs, irregularly irregular ~150, BP 132/82, no chest pain or dyspnea, well-perfused. Best action?



A. Standing-order Diltiazem

B. Recognize stable A-fib with RVR: observe and monitor (#645); treat only if instability develops

C. Synchronized cardioversion at 200 J now

D. Adenosine 6 mg IV

44. Post-ROSC after a VF arrest; organized narrow rhythm, no STEMI on the 12-lead, BP 84/50. Destination and pressor decision?

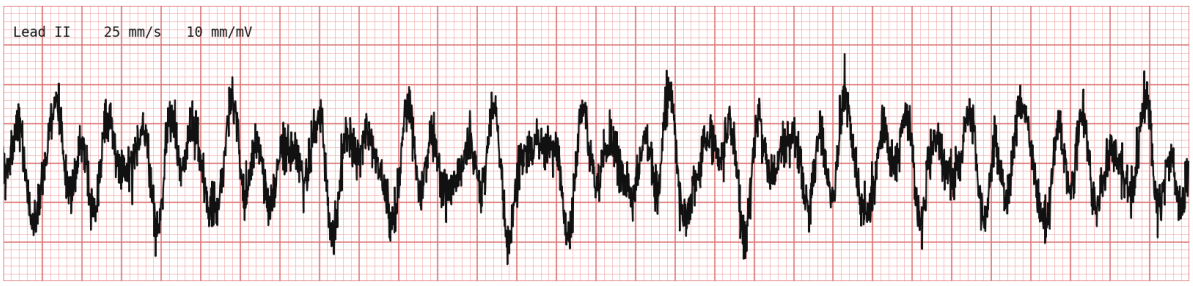
A. Transport to the closest ED only if the 12-lead shows STEMI

B. Hold transport until the blood pressure normalizes

C. Transport to the nearest STEMI Receiving Center regardless of the 12-lead reading; support BP with push-dose epi titrated to SBP > 90 (#641)

D. Give Amiodarone 150 mg prophylactically, then transport

45. 5-year-old, ~22 kg, witnessed VF arrest. Which is the correct county pediatric sequence?



A. Defibrillate max setting; Epi 1:1,000 IM

B. Defibrillate 1 J/kg; Epi 0.1 mg/kg; Amiodarone 150 mg

C. Defibrillate 2 J/kg then 4 J/kg; Epi 1:10,000 0.01 mg/kg q3–5 min; Amiodarone 5 mg/kg IV/IO push

D. Defibrillate 200 J; Epi 1 mg; Amiodarone 300 mg