



Continuing Education January 2014

Cardiac Case Studies & SOP Review

Questions/comments on this module are welcome and should be directed to:
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NOTE: Cardiac meds (*ASA, adenosine, amiodarone, atropine, dopamine, epinephrine, magnesium, NTG, vasopressin, verapamil*), monitor/defib & training combo pads should be available – before class starts

Acute Coronary Syndrome (ACS)

PM's called for 52/M c/o epigastric pain.

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| <ol style="list-style-type: none">1. List 7 locations where pts may experience discomfort from ACS. 2. List 5 anginal equivalents 3. What information should be included when obtaining a history of present illness (HPI) from a pt with suspected ACS? 4. What should be included when obtaining past medical history (PMH) from a pt with suspected ACS? 5. What are components of a physical exam for a pt with suspected ACS? | <ol style="list-style-type: none">6. What is the most common cause of MI? 7. What are other (secondary) causes of acute MI? List examples. 8. Is it important to decrease O2 demand in pts w/ suspected ACS? Why? How? 9. When should O2 be give to a pt with ACS? 10. What medication (dose & route), unless contraindicated, should be given to all pts with suspected ACS? 11. Should ASA be given to a suspected ACS pt if they are NOT experiencing discomfort? 12. Should ASA be given to pt taking ASA, clopidogrel(Plavix), dabigatran(Pradaxa) or warfarin(Coumadin)? 13. Can the pt be given a small sip of water to facilitate swallowing med? Is it beneficial to do this? Why? |
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14. What are contraindications for the above medication?

23. How can RV infarction be detected?

24. List 3 erectile dysfunction medications

25. What is the desired action of the above med?

26. What is onset of action for this drug?

15. What is the desired action of the above med?

27. Can above med be repeated? If so, what is the total number of doses that can be given?

16. How quickly can above med begin working?

28. What are side effects to above drug?

17. What are side effects of above medication?

29. What should be done if pts SBP is 90-100 ?

18. When during the call should the 12L ECG be performed?

30. What should be done if discomfort persists despite above medication?

19. What should be done if the 12L reads, “acute MI suspected”?

31. What pts should receive a different dose?

20. Why should 12L be transmitted to hosp?

32. Can the above medication be repeated?

33. What is the desired action of the above med?

21. What medication (dose & route) is indicated for pts w/ pain/discomfort thought to be due to ACS?

34. Under what circumstances should an SOP other than ACS - be used for an ACS pt?

22. What are contraindications for above med?

Bradycardia with Pulse

PM's called for 70/F c/o feeling lightheaded & dizzy. The pt is conscious, but slow to respond to questions. She denies any CP/discomfort, SOB, or GI complaints. Skin is pale and slightly moist. Radial pulse is 40.....

1. What could be underlying causes of bradycardia?
2. If pt is alert w/ gag reflex & ACS is suspected what should be given?
3. How should pain be treated?
4. Should NTG be given to this pt?
5. What 4 criteria should be present for the pt to be considered "none to mild" cardio-resp compromise?
6. What are examples of pts considered moderate to severe cardio-resp compromise?
7. What is the first medication, dose & route, used to treat bradycardia?
8. Under what circumstances is the above medication contraindicated?
9. When should the above medication be given with caution?
10. What is the desired action of the above medication?
11. By what method does this medication work?
12. Can the above medication be repeated? If yes, how much & how often?
13. What are side effects of above medication?
14. What should be done if the above medication is not effective?
15. What is the dose of the above medication?
16. If indicated, should TCP be delayed while attempting vascular access?
17. What should be done if atropine & dopamine are ineffective or contraindicated, or there is no vascular access?

22. If a pt is unresponsive to atropine, dopamine, & pacing and is on a beta-blocker – what can be done?

Narrow QRS Tachycardia

PM's are called for a 48/M c/o palpitations and SOB that began while watching TV. He denies any GI distress. Skin is pink, warm & sl moist, radial pulse is 160...

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| <ol style="list-style-type: none">1. List examples of physiologic stimulus and underlying causes of tachycardia. 2. What are 4 categories of underlying causes that should be considered for possible treatment? 3. How can a 12L ECG assist in the treatment of tachycardia 4. Where should an IV be established? 5. If ACS is suspected and pt is alert w/ gag reflex, what should be done? 6. What HR would indicate a probable need for intervention? 7. If the pt is stable, what is the first treatment that should be attempted? 8. Describe procedure for above? | <ol style="list-style-type: none">9. What should EMS personnel be doing during the above time frame? 10. If above intervention is ineffective, what should be assessed to determine the next treatment? 11. If the rhythm is regular, what is the next treatment? 12. What is the action of the above medication? 13. What is the onset & duration of action for this med? 14. What are side effects of above medication? 15. What can happen if this med is given to a pt with WPW? 16. If the above medication is ineffective, what should be done? 17. What if above - is not effective? |
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| <p>18. If unresponsive to adenosine and questionable QRS width what should be done?</p> <p>19. If rhythm is irregular, what medication (dose & route) is used?</p> <p>20. Does the pts HR need to be >150 to give above med?</p> <p>21. How does the above med work?</p> <p>22. What are contraindications for this drug?</p> <p>23. How does above medication come supplied – mg/mL? .</p> <p>24. What is the onset, peak, & duration of action for this med?</p> <p>25. What are side effects of above med?</p> <p>26. Can above medication be repeated?</p> <p>27. What are signs that would indicate the pt is unstable - has severe cardio-resp compromise?</p> | <p>28. What treatment is indicated in this situation?</p> <p>29. What should be done if lungs are clear & SBP <90?</p> <p>30. Can a brief trial of meds be given while preparing for CV?</p> <p>31. How is sync CV different from defibrillation?</p> <p>32. Why is sync CV done instead of non-sync energy delivery?</p> <p>33. What part of the ECG is the energy synchronized to deliver on?</p> <p>34. What should be done if the pt goes into VF before, during or after CV?</p> <p>35. What can be done prior to CV if the pt is conscious?</p> |
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Wide complex tachycardia

PM's called for 75/F c/o chest heaviness, SOB & dizziness which began while walking. Denies and GI c/o or diaphoresis. Radial pulse is 160...

1. What should the pt receive if alert w/ gag reflex & possible ACS?
2. What criteria are used to classify the pt as stable with none to mild cardio-resp compromise?
3. If the pt is in a regular monomorphic VT or polymorphic VT w/ a normal QT interval?
4. What is the action of the above drug?
5. What are side effects of this drug?
6. How is above drug supplied and administered?
7. If the pt has a prolonged QT interval & polymorphic VT, what should be administered?
8. How is above drug supplied and administered?
9. Should the stable pt in VT be treated with medications?
10. What should be done if the pt HR falls to <100 and discomfort persists?
11. What should be done if discomfort persists despite above med or if above med is contraindicated?
12. What criteria are used to classify the pt as unstable with severe cardio-resp compromise?
13. What treatment is indicated for the unstable pt in VT?
14. What should be considered before performing sync CV?
15. What initial energy should be used to sync CV monomorphic regular VT?
16. What should be done if not able to sync to CV & pt critical?
17. How should polymorphic irregular VT be treated?
18. What should be done if VT persists despite above?
19. Should further attempts at CV be made after amiodarone administration?

Ventricular Fibrillation

EMS crew is working a pt found in cardiac arrest.

1. What are 2 most important treatments for VF?
2. What are 5 elements to quality chest compressions
3. What are the roles for the first 5 responders for pit-crew team resuscitation?
4. How soon should an advanced airway be placed when treating pt in cardiac arrest?
5. What can be done to treat persistent/refractory VF? Why?
6. Why is epinephrine given in cardiac arrest?
7. Why is vasopressin given in cardiac arrest?
8. What is the difference between epi & vasopressin?
9. When & why is amiodarone given in cardiac arrest?
10. How can capnography help during CPR?
11. The pt develops ROSC, P 90, BP 80/50. What should be done?

Heart Failure

PM's are called for a 80/F c/o increasing SOB over past 12 hours, denies CP, GI c/o, dizziness or diaphoresis. The pt is in obvious respiratory distress.

1. How can HF be differentiated from Asthma/COPD?
2. What types of medications (list class & 1 name) do pts w/ HF often take?
3. What lung sounds are most common in HF?
4. When are crackles usually heard – inspiration or expiration?
5. Can a pt in HF have wheezes? Why?
6. When are wheezes usually heard – inspiration or expiration?
7. If a pt has a square/rectangular capnography waveform are they more likely to have HF or asthma/COPD?
8. Under what circumstances may a pt in HF have a sharkfin shaped capnography waveform?
9. What are possible causes of HF?
10. What criteria classifies the pt in HF as none to mild cardio-resp compromise?
11. How should the pt in HF be positioned?
12. How should oxygen be given to the pt in HF?
13. What is initial & max settings for CPAP?
14. What should be done if pts BP falls to <90?
15. Should ASA be given to the pt in HF – even if they are not experiencing discomfort? Why?
16. What drug, including dose & route, is used to treat HF?
17. Should the above drug be repeated? If so, how often?
18. Is there a dose limit to the above drug?
19. What can be done if drug is not dissolving?
20. Can the above drug be given if the pts HR is >100? Why?

21. What can be done if the pt is very anxious?
22. What are the criteria for cardiogenic shock?
23. What drug is used to treat cardiogenic shock?
24. Does the action of dopamine depend on the dose?
25. What is the action of dopamine @ 5 mcg/kg/min?
26. What is the action of dopamine @ 20 mcg/kg/min?
27. What is the dose?
28. How is dopamine supplied?
29. How quickly should dopamine work?
30. What can be done if pt is hypovolemic, dehydrated, lungs are clear, and resps not labored?
31. What should be given to the pt if alert w/ gag reflex?