

## I. Questions for VAD slide program –

1. The rate of central line associated blood stream infections (CLABSI) in the adult ICUs in Johns Hopkins Hospital is lower than the national average.
  - a. True
  - b. False
  
2. The mortality rate associated with CLABSIs is 10% to 20%.
  - a. True
  - b. False
  
3. The femoral site is the best site for a central vascular access device (VAD) if the subclavian site cannot be used.
  - a. True
  - b. False
  
4. Infections related to the use of central VADs can increase
  - a. Morbidity
  - b. Mortality
  - c. Hospital length of stay
  - d. Costs
  - e. All of the above
  
5. All of the following factors increase the risk of CLABSIs except:
  - a. Low nurse to patient ratio
  - b. Insertion into the femoral site.
  - c. TPN and/or lipid administration
  - d. Use of a tunneled or implantable central VAD for patients requiring long-term-access (>30 days)
  - e. Multiple lumen catheters
  - f. All of the above increase the risk of CLABSIs
  
6. Risk factors for C-VAD infection include: placement for more than 72 hours, inexperience of personnel inserting the central VAD, colonization of the catheter with organisms prior to insertion and
  - a. Inappropriate skin preparation.
  - b. Use of stopcocks.
  - c. Lack of antibiotic prophylaxis.
  - d. All of the above.
  - e. a and b

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- f. a and c
7. Antimicrobial ointment should not be applied to the exit site of non-hemodialysis catheters because it does not help to decrease the incidence of CLABSIs.
- True
  - False
8. The central line insertion site should be dressed:
- After the sterile barriers are removed
  - While the field is still sterile
  - After an x-ray has verified correct placement of the catheter
  - As soon as the insertion site has stopped bleeding or oozing
9. You have inserted a central VAD and the insertion site is oozing. You should:
- Apply a gauze dressing
  - Apply a transparent dressing
  - Apply both a gauze and a transparent dressing
  - Wait until the site has stopped oozing to apply any dressing
10. You are not required to practice hand hygiene if you wear clean gloves when checking the insertion site or changing the dressing of a VAD.
- True
  - False
11. When inserting a central VAD, maximal sterile barriers are required. This includes:
- Face mask, cap and sterile gloves
  - Sterile gown that is snapped and tied
  - Assistants wearing the same barriers
  - Use of fenestrated drape in kit only
  - Use of large sterile drape that covers the entire patient
- 1, 2, 3, 4
  - 1, 2, 4
  - 1, 2, 3, 5
  - 1, 2, 5
  - All of the above
12. After applying the Chloraprep<sup>®</sup> to the insertion site, one should wait until the site is completely dry without fanning or blotting before proceeding.
- True

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- b. False
13. The use of chlorhexidine as a skin preparation (as opposed to Povidone-iodine) is associated with decreased CLABSI rates in studies.
- True
  - False
14. Of the following, which actions will decrease the risk of CLABSIs.
- Routine guidewire exchange of the central VAD.
  - IV antimicrobial prophylaxis.
  - Inserting a single lumen rather than multiple lumen central VAD.
  - Changing to a new set of sterile gloves before handling the new central VAD when performing a guidewire exchange.
  - Insertion of the central VAD through open techniques/cutdown.
- 1, 2, 3, 4
  - 2, 3, 4, 5
  - 1, 2
  - 3, 4
  - 1, 2, 5
  - All of the above
15. Ms. Marple has an unexplained fever and you suspect a Blood Stream Infection. Upon inspection of her internal jugular central line insertion site, you see erythema and a small amount of pus. What should you do?
- Give vancomycin only
  - If a central line is still necessary, remove the current line and replace it with a guidewire exchange and assess the need for antibiotics
  - If a central line is still necessary, remove the current line and place another in a new site and assess the need for antibiotics
16. When requesting a catheter culture, submit a 5 cm segment that includes the the tip.
- True
  - False
17. If a catheter culture comes back positive, but the blood sample cultures are negative, evaluate the entire picture. Reassess the patient before giving antibiotics.
- True
  - False
18. When attempting to diagnose a CLABSI, two sets of blood samples should be drawn for culture. The proper sites to culture are:

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- a. One from a catheter hub, the other from a peripheral source.
  - b. Two different peripheral sources.
  - c. Both from a catheter hub.
19. The proper procedure to culture blood from a suspected source is to draw 20cc of blood and place 10cc in each of two bottles.
- a. True
  - b. False
20. Preferred site selection for an arterial line is as follows:
- a. dorsalis pedis > brachial/axillary > radial > femoral
  - b. dorsalis pedis > radial > femoral > brachial/axillary
  - c. radial > brachial/axillary > dorsalis pedis > femoral
  - d. femoral > radial > dorsalis pedis > brachial/axillary
  - e. radial > dorsalis pedis > femoral > brachial/axillary
21. While inserting an arterial line in the radial or dorsalis pedis sites, maximal sterile barriers are not required although sterile drapes should be used to create a sterile work space.
- a. True
  - b. False

Correct answers are:

1. a
2. a
3. b
4. e
5. d
6. e
7. a
8. b
9. a
10. b
11. c
12. a
13. a
14. d
15. c
16. a
17. a
18. b
19. a
20. e
21. a

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