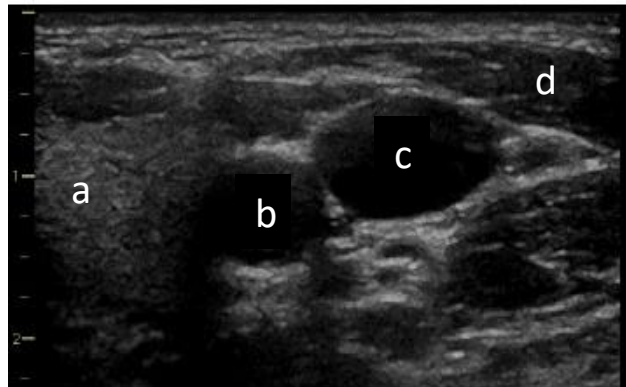


Central Venous Catheter (CVC) Insertion – Quiz

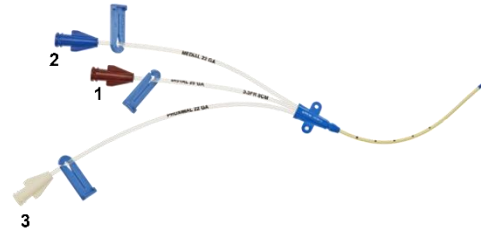
1. Which of the following is NOT an indication for CVC placement?
 - a. Vasopressor administration
 - b. Nutritional support
 - c. Hemodialysis
 - d. Massive transfusion
2. Which of the following is a contraindication to CVC placement?
 - a. INR of 4
 - b. Thrombus within the internal jugular vein
 - c. Maculopapular rash over the face and neck
 - d. History of end-stage kidney disease
3. What is the preferred patient positioning for CVC placement in the right internal jugular vein?
 - a. Left lateral decubitus
 - b. Supine
 - c. Trendelenburg (head below the level of the feet)
 - d. Reverse Trendelenburg (head above the level of the feet)
4. Assuming no patient allergies, which of the following is the preferred antiseptic for skin preparation prior to CVC placement?
 - a. Chlorhexidine
 - b. Iodine
 - c. Isopropyl alcohol
 - d. Chloroxylonol
5. Which of the following ultrasound transducers should be used for real-time ultrasound guidance of CVC insertion?
 - a. Curvilinear
 - b. Cardiac
 - c. Linear
 - d. Radial
6. Please match the following anatomic landmarks to the appropriate label:

Internal jugular vein - c
Internal carotid artery - b
Muscle - d
Thyroid – a



Central Venous Catheter (CVC) Insertion – Quiz

7. Which port does the guidewire come out of?
- Medial port, labeled '2'
 - Distal port, labeled '1'
 - Proximal port, labeled '3'
 - Depends on which port is unclamped



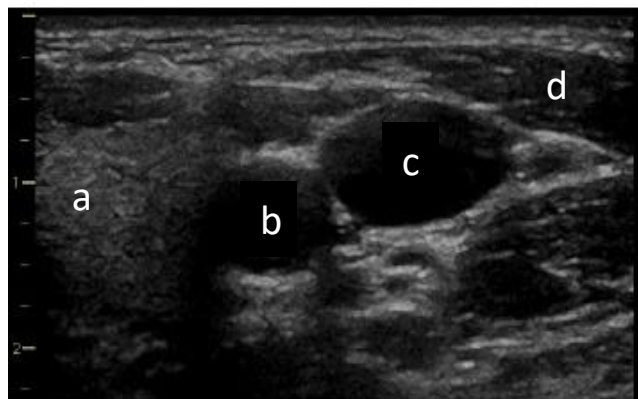
8. Which of the following most reliably confirms a venous (versus arterial) cannulation of the internal jugular vein?
- Visualization of dark red (opposed to bright red) blood in the syringe
 - Ease of wire insertion to 10-15cm
 - Real-time ultrasound visualization of the wire in the IJ vein
 - Observing a slow drip of blood from the needle, after removing the syringe
9. Which of the following best describes the most appropriate depth of a triple lumen catheter placement in the internal jugular vein?
- Advance till ectopy, then withdraw until ectopy resolves
 - Fully hub catheter, then use a chest radiograph to determine how far to withdraw
 - Place in the range of 12-16cm depending on the patient's height
 - Depends on the indication for placing the triple lumen catheter
10. Which of the following is most consistent with the correct placement of a supradiaphragmatic central venous catheter insertion?
- Visualization with ultrasound of turbulent fluid in the right atrium after injecting agitated sterile saline through the CVC
 - Visualization with ultrasound of the catheter tip in the right atrium
 - Visualization of the catheter tip in the middle of the superior vena cava on a chest radiograph
 - Visualization of the catheter tip in the right atrium on a chest radiograph

Central Venous Catheter (CVC) Insertion – Quiz

Answers in **Bold**

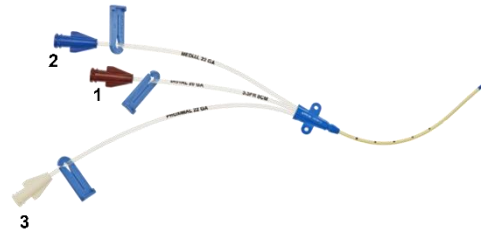
- Which of the following is NOT an indication for CVC placement?
 - Vasopressor administration
 - Nutritional support
 - Hemodialysis
 - Massive transfusion**
- Which of the following is a contraindication to CVC placement?
 - INR of 4
 - Thrombus within the internal jugular vein**
 - Maculopapular rash over the face and neck
 - History of end-stage kidney disease
- What is the preferred patient positioning for CVC placement in the right internal jugular vein?
 - Left lateral decubitus
 - Supine
 - Trendelenburg (head below the level of the feet)**
 - Reverse Trendelenburg (head above the level of the feet)
- Assuming no patient allergies, which of the following is the preferred antiseptic for skin preparation prior to CVC placement?
 - Chlorhexidine**
 - Iodine
 - Isopropyl alcohol
 - Chloroxylonol
- Which of the following ultrasound transducers should be used for real-time ultrasound guidance of CVC insertion?
 - Curvilinear
 - Cardiac
 - Linear**
 - Radial
- Please match the following anatomic landmarks to the appropriate label:

Internal jugular vein - c
Internal carotid artery - b
Muscle - d
Thyroid – a



Central Venous Catheter (CVC) Insertion – Quiz

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- Medial port, labeled '2'
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 - Depends on which port is unclamped



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 - Place in the range of 12-16cm depending on the patient's height**
 - Depends on the indication for placing the triple lumen catheter
10. Which of the following is most consistent with the correct placement of a supradiaphragmatic central venous catheter insertion?
- Visualization with ultrasound of agitated fluid in the right atrium after injecting sterile saline in any of the three lumens**
 - Visualization with ultrasound of the catheter tip in the right atrium
 - Visualization of the catheter tip in the middle of the superior vena cava on a chest radiograph
 - Visualization of the catheter tip in the right atrium on a chest radiograph