



Unlocking Common ED Procedures

Never Let Go: A Review of Central Venous Access Placement in the ED

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✓ Rapid Procedure Review

1. Position the patient in trendelenburg.
2. Assess the anatomy under ultrasound bilaterally to assure the safest site is utilized.
3. Sterile preparation of the procedure site and the proceduralist.
4. Drape patient.
5. Prepare sterile ultrasound probe cover.
6. Prepare central line by flushing all lines and applying caps to 2 of the 3 ports.
7. Anesthetize insertion site by first making a wheel of lidocaine at the site and then injecting lidocaine throughout the subcutaneous and deep tissues under ultrasound guidance.
8. Under ultrasound guidance, insert introducer needle through the skin and advance towards the internal jugular vein via the tract of lidocaine previously made.
9. Always keep the needle tip in view under ultrasound.
10. Once flow is obtained within the syringe, drop the angle of the needle and reconfirm blood flow. See above for methods of managing loss of flow.
11. Remove syringe from needle and advance wire. See above for methods of managing difficulty in wire advancement.
12. Once the wire is at least 20cm within the vessel, remove the needle over the wire and confirm placement of the wire under ultrasound.

13. Make a small nick of a #11 scalpel with the blade facing away from the midline.
14. Advance dilator over the wire with the intention of dilating the soft tissue but not the vessel. This depth of dilation will be dependent on body habitus and anatomy which should be taken into account when assessing the anatomy under ultrasound.
15. Advance the catheter over the wire and carefully feed the wire back through the catheter once at the skin to assure control of the wire before catheter advancement into the vessel.
16. Once the catheter is within the vessel, remove the wire completely.
17. Cap the third port from which the wire was removed.
18. Flush all 3 ports.
19. Secure line with suture.
20. Apply antibiotic patch and sterile dressing.
21. Sit patient up and order post-procedure chest x-ray.



Looking for more detailed information on procedural steps, indications, contraindications, pearls, and pitfalls?
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