External Jugular IV Cannulation

RN Verification Program

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What Will Be Covered Today?

• Indications/Contraindications
• Basic Anatomy of the Neck
• Preparation for Placement
• Technique for Placement
• What to Document
Introduction

• **Obtaining IV access** can often be a **major problem** for patients and healthcare providers.

• Delays in IV access lead to **delays in patient care** and **expose patient to undue pain and anxiety**, both of which are bad for patients and healthcare providers.

• This impacts **patient satisfaction scores** and consequently impacts the amount of revenue the hospital earns.
Consider EJ with These Patients:

- Arrest victims
- Anorexia
- Substance Abuse
- Hypothermic
- Drowning
- Renal failure
- Cancer

- Elderly
- Debilitated
- Pediatric
- Trauma
- HIV/AIDS
- Sepsis
- Home Health
- Shock
Indications

- External jugular vein cannulation is indicated in a critically ill patient >12 years of age who requires intravenous access for fluid or medication administration and in whom an extremity vein was not attainable.

- External jugular cannulation can be attempted initially in life threatening events where no obvious peripheral site is noted.
Contraindications

- Patient cannot tolerate being flat.
- Patient is actively vomiting.
- Patient is agitated, moving head.
- Patient has a neck mass.
- Patient has a VP shunt on side of intended insertion.
Continued...

- **Cervical Spine** Trauma
- Soft tissue neck trauma
- **Circumferential burns** to the neck
- Inability to identify anatomical landmarks for cannulation
- Evidence of *infection at or near the intended insertion site*
Basic Anatomy

• Anatomical location of the EJ
• What structures to avoid
Preparation

• Verify physician order.
• Assemble equipment.
• Explain procedure to patient/family/caregiver.
• Wash hands or use alcohol gel/foam
• Put on non-sterile gloves.
• Place the patient supine and head down if possible. This helps to distend the jugular veins and reduces the possibility of an air embolism
• Turn the patient’s head away from the side of the neck you intend to use.
Assemble supplies.
Place patient in trendelenburg.
Turn head towards contralateral side.
Technique
• **Identify** the external jugular vein.

• **Cleanse** venipuncture site using chlorhexidine gluconate sponge with vigorous side-to-side prep and allow to dry.

• Lightly place a finger of the non-dominant hand just above the clavicle to produce a **tourniqueting effect**.

• Use the thumb of that same hand to **pull traction** above the puncture site.

• **Puncture the vein** midway between the angle of the jaw and the clavicle and cannulate the vein in a **shallow and superficial manner**.
• **Confirm placement** of catheter/needle by witnessing flashback.

• **Remove the IV catheter needle** according to manufacturer’s directions, activate safety device, and discard in appropriate receptacle.

• **Attach IV tubing** or **saline lock device** primed with IV solution to hub.

• **Apply transparent dressing** and tape to catheter to secure, avoiding circumferential dressing or taping.
Complications:

• Hematoma
• Infection
• Air Embolism
• Infiltration
FAQs:

• Can I draw blood from an EJ? Yes.

• Can I put pressors thru an EJ? Yes, but monitor closely.

• Should I use an infusion pump? Yes, typically.

• Can radiology give contrast thru EJ? Yes, but NOT typically for angio.
Nursing Measures:

- Monitor site for signs of complications:
  - Redness
  - Warmth
  - Infiltration
- Use IV infusion pumps.
- Use luer-lock connectors.
Documentation should include:

- **Size** of catheter
- **Site** location
- Type of IV fluids infusing or if catheter was capped off
- How patient tolerated procedure
• **Who** can insert an EJ?
  • RN’s with a minimum of 2 years experience that have completed an external jugular intravenous catheter insertion program and validated competency
  • Licensed Physicians, Certified Registered Nurse Anesthetist (CRNA)

• **Who** can **Validate competency**?
  • Attendings.
  • Senior residents.

• **What** do I do with my completed competency validation form?
  • Make a copy to keep for yourself.
  • Give original to your ANC to place in your file.
Highlights

• **Ask MD** before attempting EJ placement.
• **Clean the Skin**! Scrub, Scrub, Scrub
• **No blind sticks**! If you can’t see it, do stick it.
• Remain **shallow and superficial** when inserting.
• Assure that you have blood return.
• An **attending or senior resident** must observe and check-off for validation.
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