



## Shock Trauma Go-Team Standard Operating Procedure ER REBOA™ Insertion

Last update: 6 October 2020



### Indications

- ▶ Cardiac arrest (<10 minutes) secondary to exsanguination from sub-diaphragmatic hemorrhage **AND** femoral vessels immediately identifiable on ultrasound
- ▶ Severe hypovolemic shock **AND** a systolic blood pressure < 70 mm Hg
- ▶ Patients in an agonal state due to non-compressible intra-abdominal hemorrhage due to:
  - ▶ Blunt trauma or penetrating torso injuries (Zone 1 REBOA)
  - ▶ Blunt trauma with suspected pelvic fracture and isolated pelvic hemorrhage (Zone 3 REBOA)
  - ▶ Penetrating injury to pelvic or groin area with uncontrolled hemorrhage from a junctional vascular injury (iliac or common femoral vessels; Zone 3 REBOA)

### Contraindications

- Age > 70 (may not be known at time of call; relative contraindication)
- Cardiac arrest due to causes other than exsanguination due to severe subdiaphragmatic trauma
- High clinical suspicion of proximal traumatic aortic injury

### Procedural Steps

1. Use contralateral Common Femoral Artery (CFA) if suspected junctional vascular injury
2. Scrub, drape, prepare femoral line / micropuncture / ER REBOA sheath (see margin)
3. Identify the CFA 2 cm below the inguinal ligament at the mid-inguinal point (halfway between the pubic symphysis and anterior superior iliac spine) using ultrasound
4. Insert femoral line or micropuncture catheter
5. Insert long guidewire into femoral catheter
6. Remove the catheter over the guidewire and replace with 7 Fr introducer sheath
7. Insert the peel-away ER REBOA sheath and catheter into the 7 Fr introducer sheath 5 mm or until the peel-away sheath hits a stop
  - a. **Do NOT** advance the peel-away sheath any further
  - b. Advance the catheter 10-20 cm into the introducer sheath then slide the peel-away sheath toward the catheter hub
  - c. **Do NOT** allow the entire peel-away sheath to enter the introducer sheath; the peel-away sheath is intended only to temporarily open the valve of the introducer sheath to facilitate introduction of the catheter tip
8. Insert catheter to desired distance
  - a. Zone 1 is measured from the insertion site to the xiphoid, approximately 50 cm)
  - b. Zone 3 is measured from the insertion site to the umbilicus, approximately 40 cm)
9. Refer to balloon inflation parameters Do NOT inflate > 24 mL (see table in margin)
10. Secure catheter
11. If deflation is planned, open balloon stopcock and draw a vacuum using the syringe
12. Allow adequate time for the balloon to deflate

### Equipment

- ▶ Introducer sheath (7 Fr minimum)
- ▶ 30 mL syringe
- ▶ Sodium chloride (sterile, multiple syringes)
- ▶ Micropuncture arterial access kit (Cook 21 g needle with guidewire and microcatheter)
- ▶ Cook or ARROW femoral arterial line access kit
- ▶ Guidewire (0.035 inch, 180 cm)
- ▶ ER-REBOA™ catheter with pre-installed peel-away sheath
- ▶ Tegaderm dressings

### Preparation of ER REBOA Catheter

- ▶ Attach syringe with saline and open stopcock on balloon lumen
- ▶ Purge all air from balloon
- ▶ Completely deflate balloon and close stopcock
- ▶ Disconnect syringe and purge air from syringe
- ▶ Refill syringe with up to 24 mL of saline
- ▶ Slide the peel-away sheath towards the catheter distal tip to fully enclose and straighten the tip (may need to wet outside of balloon with saline to facilitate advancement of sheath)

### Balloon Inflation Parameters

Balloon Diameter	Inflation Volume
15 mm	5 cc
20 mm	8 cc
25 mm	13 cc
30 mm	20 cc
32 mm (MAX)	24 cc (MAX)

**TRANSPORT TO SHOCK TRAUMA SHOULD BE THE STANDARD FOR ANY PATIENT RECEIVING REBOA**