

**UAMS MEDICAL CENTER
TRAUMA SERVICES MANUAL**

SUBJECT: Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA)

SUPERSEDES: New

PAGE: 1 of 3

RECOMMENDATION(S): Dr. JR Taylor

APPROVAL: 1/4/2018

CONCURRENCE(S): Trauma - All

EFFECTIVE: 1/4/2018

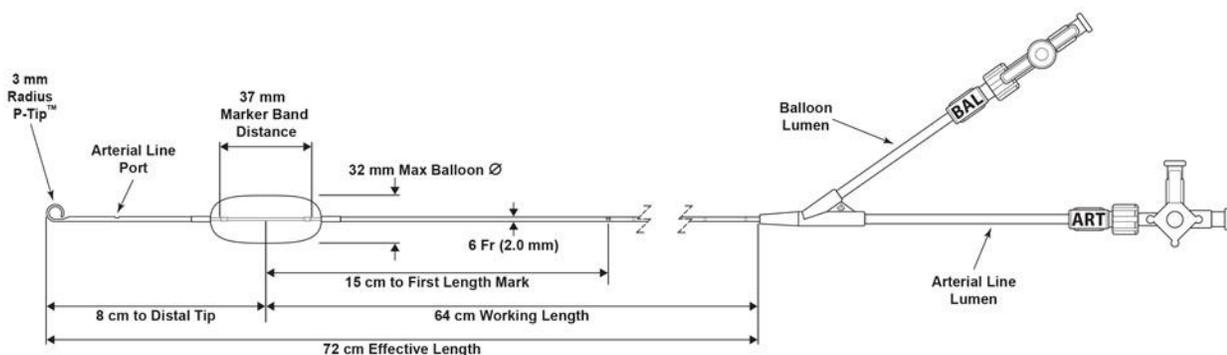
Reviewed: 2/21/2019

PURPOSE:

To describe the insertion of REBOA for aortic occlusion

POLICY:

ER-REBOA™ Catheter



<http://prytimedical.com/wp-content/uploads/2017/05/er-reboa-instructions-us.pdf>

Insertion Steps:

1. Access the common femoral artery (CFA) 2 cm below the inguinal ligament using the micropuncture kit and catheter. Ultrasound utilization is ideal, but landmarks, fluoroscopy, blind placement or cut- down on the CFA can be utilized.
 - An 18 gauge femoral arterial line catheter (18 Gauge Arrow® Femoral Arterial Line) can also be used as the wire from the 7Fr introducer sheath (7Fr Cordis AVANTI®+ Introducer) kit will go through the catheter.
 - It is acceptable to place the 7Fr Cordis J-wire into the 18 gauge femoral arterial line catheter (and exchange for the 7Fr sheath immediately), but be aware of a smooth resistance as the wire passes beyond the catheter tip.
2. Once the microcatheter is confirmed in the CFA, remove the dilator, and insert the J-wire (from the 7Fr Cordis sheath package) into the microcatheter. Exchange the microcatheter for the 7 Fr sheath (w/dilator) over the J-wire. Remove the dilator and J-wire.
3. Remove the ER-REBOA from the package. Fill the 30 cc Luer-lock syringe from the ER-REBOA kit with 24 cc of injectable saline and attach the 30cc syringe to the balloon port, apply negative pressure to 30cc to remove any remaining air from the balloon, and lock in place. DO

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NOT PLACE MORE THAN 24 cc IN THE SYRINGE. The ER-REBOA balloons hold a MAXIMUM of 24 cc. Flush the arterial port in order to ensure a column of fluid in the arterial line portion of the REBOA.

4. Measure approximate distance of insertion using the white hash mark on the catheter:
 - Zone 1 external landmark – tip of ER-REBOA at sternal notch
 - Zone 3 external landmark – tip of ER-REBOA at xiphoid
5. Advance the orange peel away sheath over the balloon and P-tip. Insert the orange sheath tip into the 7Fr sheath to pop open the valve (barely 1cm). Insert the catheter through the peel-away sheath and 7Fr sheath to the desired distance. Retract or peel the orange sheath away in order to visualize the catheter markings. A chest or abdominal x-ray MUST BE obtained to confirm device placement prior to balloon inflation. While waiting for x-ray, attach the A-line port (flush optional) to the transducer to obtain a systemic arterial pressure before the balloon is inflated.
6. Once the catheter is confirmed in the desired location (2 radiopaque markers located at each end of the balloon will be visible on x-ray), hold the catheter at its insertion site into the sheath DURING and AFTER inflation (especially at Zone 1). Failure to secure the catheter during and after inflation may result in balloon migration and possible aortic intimal injury.
7. Inflate the balloon until an increase in the patient's blood pressure is seen or there is loss of pulse in the contralateral femoral artery. The balloon holds a max 24cc of saline and over inflation should be avoided. Once inflated to the appropriate volume lock in place.
 - Average balloon fill for Zone 1: 15 cc (unpublished data)
 - Average balloon fill for Zone 3: 11 cc (unpublished data)
8. Secure the catheter to the sheath, and sheath to the patient. Additional x-rays are optional but encouraged if time permits.
9. Once the need for the catheter has passed, deflate the balloon by attaching an empty syringe, retracting to 30cc, and lock in place. A few seconds is required to remove all fluid and air from the balloon and catheter. Disconnect the A-line transducer from the A-line port and lock.
10. Remove the catheter from the sheath.
11. Flush the 7Fr sheath with saline.
12. When coagulation parameters are improved/corrected and patient has stabilized, remove the sheath from the groin and apply manual compression for 30 minutes. No closure device has been found to be more effective than CORRECTLY APPLIED manual compression. The patient must be supine (no hip/knee flexion) for 6 hours after compression is completed. Preferentially this should be done prior to leaving the Operating Room with verification of pulses before and after removal. If there is any doubt about pulse examination, on table angiogram via a 7FR sheath should be completed prior to sheath removal.

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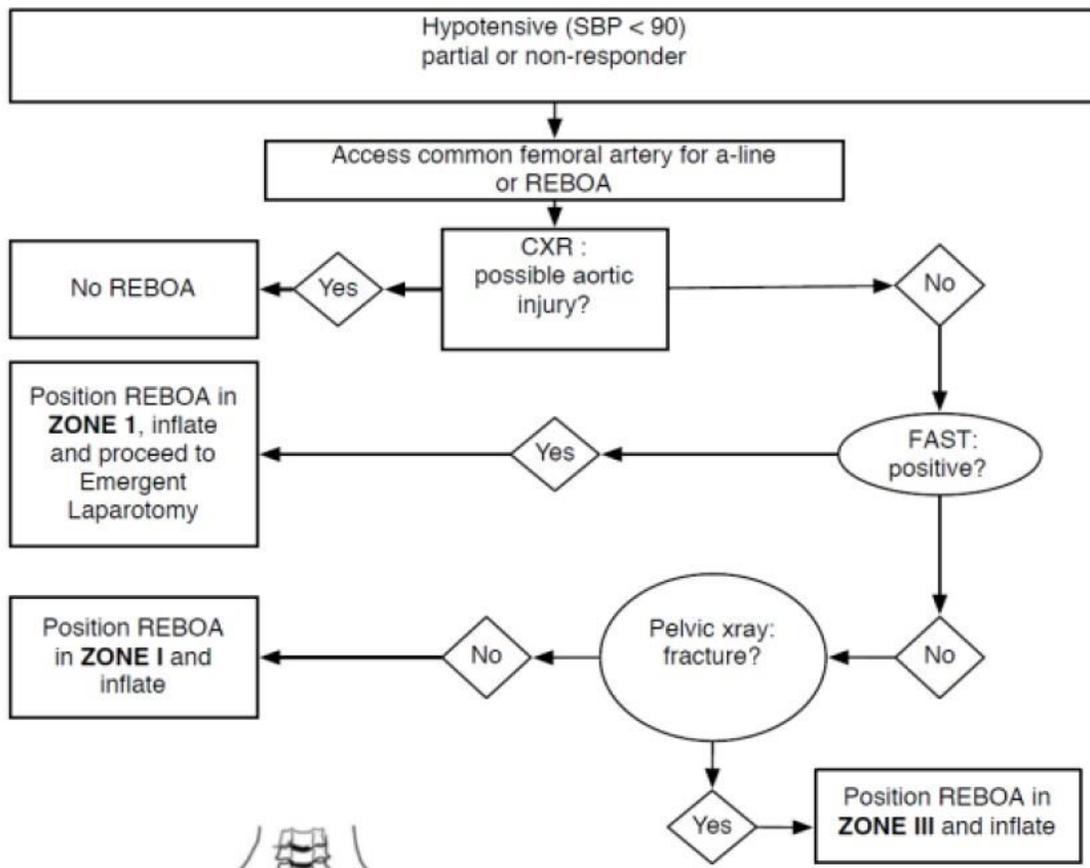
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13. A duplex arterial ultrasound of the arterial access site should be obtained 48 hours after sheath removal to assess for pseudoaneurysm formation or thrombus.



NOTES:

- External landmarks for the inguinal ligament are the ASIS to superiolateral pubic tubercle.
- The duration of balloon occlusion should be limited as much as possible. If return of perfusion is obtained, expeditiously control hemorrhage (via angioembolization, ex-fix and/or surgery) and resuscitate to facilitate the earliest possible balloon deflation.