**Converting of VV to VA ECLS on CardioHelp:**

PURPOSE:

To outline the ECLS team’s responsibilities when converting from VV to VA ECLS.

SUPPORTIVE DATA:

Successful management of the patient on VV ECLS depends on the adequate provision of cardiac output and oxygen content. If the optimal cardiac output or oxygen content cannot be maintained with maximal pump flow, increased ventilator FiO2, repositioning the VV cannula, or maintaining the hemoglobin greater than 15, converting to VA ECLS must be considered.

EQUIPMENT LIST:

* Sterile 12” cannula connector line of appropriate size
* Arterial cannula (8,10,12 or 14 Fr).
* MALE luer connector.
* 4 circuit clamps of appropriate size.
* IV solution and tubing to infuse into old arterial re-infusion line.
* Eye and mucus membrane protection, gloves.

STEPS:

* + - * Give sterile 12” cannula connector line and appropriate sized arterial cannula to surgical circulating nurse to hand to scrub nurse. The connector line and arterial cannula are primed and inserted by the surgeon.
			* Double clamp the arterial limb of V-V cannula after the luer from the original cannula connector.
			* Sterilize the tubing between the clamps with alcohol and cut arterial limb tubing.
			* Connect the new arterial cannula to arterial side of the circuit, priming the connection with flush solution. May remove any residual air via the luer.
			* Remove the clamps to establish arterial flow through the new cannula and clamp old arterial cannula connecting line. ECLS flow is now through new arterial line.
			* Double clamp old arterial cannula connecting line as close as possible to the VV cannula (high) and cut between the clamps.
			* Attach male straight luer connector to the end of the old arterial cannula. Infuse with heparinized saline ½ NS with 1 unit heparin/ml at 5ml/hr.

DOCUMENTATION: Record time, date, and indication for conversion to VA ECLS on the ECLS flowsheet.

An alternative would be to continue to use arterial limb of VV cannula for arterial blood return in addition to new arterial cannula in carotid artery. This would continue to supply oxygenated blood to the lungs and coronary arteries. To do this, you would need a ⅜ or ¼ inch Y luer connector (depending on size of the circuit.

* Double clamp on both sides of the luer on the cannula connector of the arterial limb of the VV cannula
* Clean between the clamps with alcohol, then cut out the luer of the cannula connector.
* Connect the 2 ends of the arterial limb to the ⅜ or ¼ “Y” luer connector of the new arterial cannula airlessly
* Remove any residual air by using the luer connector.
* Remove all clamps slowly to establish arterial flow
* Turn up circuit flow to achieve adequate patient support

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