

CARDIAC SESSION 1 SUMMARY

Title	Name	Key Points
CURRENT STRATEGIES TO MANAGE THE SYSTEMIC INFLAMMATORY RESPONSE AFTER CPB IN NEONATES	Checchia, Paul	<ol style="list-style-type: none"> 1. The inflammatory response triggered by CPB share many similarities with that triggered by infection and sepsis; but there is danger in assuming they are the same. 2. Age and developmental responses influence the inflammatory response. 3. There are novel interventions available that may influence this response.
HOW DO YOU MANAGE TRANSPOSITION OF THE GREAT ARTERIES WHEN NEONATAL DIAGNOSIS IS DIFFICULT?	Iyer, Parvathi	<ol style="list-style-type: none"> 1. Late presentation of d transposition of great arteries with intact ventricular septum (dTGA.IVS) is common in Asia. 2. Most neonates or infants present in circulatory collapse with profound lactic acidosis and varying degrees of organ dysfunction. 3. Our earlier practice 15 years ago <ul style="list-style-type: none"> < 3 weeks of age -an arterial switch, > 3weeks a rapid 2 stage switch > 6weeks of age -a Senning 4. Current practice since last 10 year <ul style="list-style-type: none"> up to 2 months of age -a primary arterial switch 2-3 months of age usually a primary arterial switch >3mo primary arterial switch or a Senning, depending on LV configuration 5. When to switch ? <ol style="list-style-type: none"> a) If easily stabilized with negative cultures and appears neurologically alright he/she is taken up for surgery after a head ultrasound b) If the baby is septic and is only a few days old, then is treated for sepsis, a balloon septostomy done if needed and discharged – an elective primary switch is then done after sepsis has been adequately treated. c) If the baby is over 6 weeks and septic then the baby is operated under cover of antibiotics or an atrial stent sited and discharged d) if the lactic acidosis was profound, after stabilization a Screening brain MRI is done to exclude major neurologic injury. 6. A late primary arterial switch is invariably associated with transient but severe postoperative low cardiac output states (LCOS). ECLS for managing this LCOS is not a feasible routine option due to high resource utilization.

		<ol style="list-style-type: none"> 7. LCOS can be managed in most instances without ECLS using many evidence based physiologic maneuvers in a multimodal fashion to improve cardiac output. However, aggressive after load reduction remains the mainstay of management. 8. Metabolic demand is kept at a minimum (profound sedation and analgesia, mild hypothermia, muscle relaxation) while the left ventricle gradually recovers. Utilizing noninvasive ventilation following extubation to improve cardiac output is also a well-described inexpensive strategy. 9. Important pitfalls to avoid are chasing blood pressures when perfusion is appropriate and to avoid generous fluid boluses 10. We have successfully utilized this reproducible “LCOS management care pathway” in 75 infants following late primary arterial switch. Implications to clinical practice <ol style="list-style-type: none"> 1) Cost saving with earlier transfer out of the PCICU 2) Avoids potential complications of ECLS in units manned by less experienced nursing and medical staff 3) Useful in humanitarian missions.
<p>CONSIDERATIONS FOR POST OPERATIVE MANAGEMENT AFTER STAGE 1 PALLIATION FOR HLHS</p>	<p>Magliola, Ricardo</p>	<ol style="list-style-type: none"> 1. Surgical options for the Stage I palliation are Norwood with BTS and Norwood with Sano modification 2. Standard monitoring in Argentina includes cardiorespiratory monitoring, NIRS monitoring, as well as ABG and lactate trends. 3. There is still a need for better monitoring/markers of systemic oxygen delivery. 4. Infants with HLHS demonstrate RV dysfunction early, then improve 5. Some advancement in stem cell and mechanical support may offer new treatment options for infants with single ventricle physiology
<p>WHAT DOES THE CARDIAC INTENSIVE CARE PHYSICIAN NEED TO KNOW ABOUT THE NEONATAL BRAIN?</p>	<p>Miller, Steven</p>	<ol style="list-style-type: none"> 1. Brain injury is common in neonates with congenital heart disease 2. Timing of injury informs mechanisms of injury in neonates with congenital heart disease 3. Brain development is impaired in neonates with congenital heart disease 4. The developing brain is sensitive to several aspects of intensive care.

SHOULD FLUID
MANAGEMENT AND
TRANSFUSION STRATEGIES
BE DIFFERENT FOR
CARDIAC NEONATES?

Willems,
Ariane

1. Targeting physiologic parameters for transfusion of PRBCs (ie markers of oxygen delivery) is important to consider in addition to Hgb targets
2. Empiric transfusion of platelets and FFP is not recommended