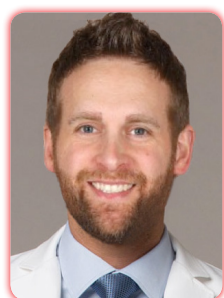


2nd WORLD HEART CONGRESS

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Jacob Ostrowsky

Rainbow Babies & Children's Hospital, USA

Cardiopulmonary bypass for neonates and infants

Cardiopulmonary bypass (CPB) enables surgical correction of congenital heart defects by diverting the patient circulation around the area that requires repair. Used along with myocardial arresting solution, the surgeon is able to work in a bloodless and motionless operative field. The heart-lung machine has been used for more than 60 years and has undergone a multitude of improvements to the device itself. In addition, the artificial organ components that make up the extracorporeal circuit have improved dramatically. The techniques used to manage CPB have taken great strides to reduce and eliminate the negative sequelae that have been historically linked to these procedures. The commitment of manufacturers to improving equipment and disposables is a key element, but the techniques used by the caregiver managing the system are paramount to providing the best possible protection for patients during CPB. Circuit miniaturization, fluid management and site specific monitoring all contribute to safe and consistent results. The need for strict attention to detail is emphasized in the neonatal and infant population. Special attention is paid to techniques that can reduce edema, improve hemostasis, protect organ function and markedly decrease the need for homologous donor blood component therapy. Historical benchmarks for outcomes, related only to mortality, are no longer an acceptable standard. The evolution of outcomes begets the need to stratify and analyze results to give every patient the ability to reach their best quality of life based on their individual baseline potential. This presentation will discuss our approach to neonatal and infant CPB at Rainbow Babies & Children's Hospital to facilitate improved outcomes in the surgical correction of congenital heart defects.

Biography

Jacob Ostrowsky is Chief Perfusionist at The Congenital Heart Collaborative at Rainbow Babies & Children's Hospital, USA. He has obtained his Bachelor of Science degree in Perfusion Technology from Rush University, Chicago, IL (2003). He is the recipient of the College of Health Sciences Dean's Award for Outstanding Academic Achievement, Associate of Applied Science degree Respiratory Therapy at Southeast College, Lincoln, NE (1999). He is board Certified Clinical Perfusionist (CCP), American Board of Cardiovascular Perfusion (ABCP), Fellow of Pediatric Perfusion (FPP) and American Society of ExtraCorporeal Technology (AmSECT). His clinical and research interests are neonatal and pediatric cardiopulmonary bypass, bloodless surgery and blood conservation strategies, extracorporeal circuit miniaturization, autologous extracorporeal circuit priming techniques, near infrared regional spectroscopy, cerebral protection strategies and adult congenital heart surgery.

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