

16th World Cardiology Congress

December 08-10, 2016 Dubai, UAE

Performing extracorporeal membrane oxygenation in cardiopulmonary resuscitation for newborn according to 2015 guidelines

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Cardiopulmonary resuscitation for the newborn needs to be more demonstrated with hospital staff not only pediatrics and obstetrics specialists but nurses and technicians as well. Success is only made with a team approach. Simulations and manikins play important role for training. Updated 2015 guidelines are available and a new one will replace five years later. Extracorporeal Membrane Oxygenation Technique (ECMO) helps for survival. Examples of resuscitation errors include failure to accurately detect heart rate, clinically significant delays in the initiation of Positive Pressure Ventilation (PPV), initiation of Chest Compressions (CC). Physiologic changes during delivery plays an important role. Approximately 85% of babies born at term will initiate spontaneous respirations within 10-30 s of birth, and the rest will respond to drying, stimulation and PPV. But 2% will be intubated and 0.1% will require CPR. The components of an effective CPR are optimal assessment of heart rate, umbilical cord milking, temperature maintenance in the delivery room and the infant, sustained inflations, oxygen concentration for resuscitating premature newborns, CC ratio and neonatal resuscitation instructors. Bartlett published the initial experience of ECMO with 45 newborns. This trial showed a >50% survival in patients whose mortality estimated at the time of was 90%. The UK trial of neonatal ECMO is the only controlled randomized trial to determine its efficacy. Its compared outcome (mortality and disability) between similar children managed in good quality neonatal centers in a standard fashion against transfer to and treatment in an ECMO centre. According to the results ECMO was superior to conventional approach. ECMO requires some more parameters to monitorize such as blood flow (ml/kg/min), revolutions per minute (rpm), pressure in the circuit, anticoagulation. ECMO treatment is best for the newborns with meconium aspiration. In the near future, we will be discussing extracorporeal fetal support technique.

Biography

Baris Cankaya has completed his graduation from Ankara University Medical Faculty in 2000. He is working as Anesthesiology Specialist at Marmara University Training Hospital. He has attended several academic meetings nationally and internationally. His academic interests include microcirculation, fluid therapy, resuscitation, patient safety and perioperative analgesia. He has participated in various international workshops, congress/symposiums and certifications and to list a few: EPLS provider Berlin 2015; NLS provider Athens 2015; MECOR Level I October 2014; ECMO workshop 2015, Leicester; Airway workshop ICISA 2014, Tel Aviv; Innovations Workshop ICISA 2014, Tel Aviv; Gastro 2016, Birmingham: oral presentation: Sedation for pediatric patient with end stage hepatic disease outside operating room; International intensive care symposium Istanbul 2015 and so on.

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