ICU TRIALS OF 2017

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part three

a compilation of some of the major trials of 2017

Dr. David Lyness

TRIAL	WHAT DID IT SAY?
Safety of mechanical chest compression devices AutoPulse and LUCAS in cardiac arrest: a randomized clinical trial for non-inferiority	LUCAS does not cause significantly more serious or life-threatening visceral damage than manual CC. For AutoPulse, significantly more serious or life-threatening visceral damage than manual CC cannot be excluded.
Feasibility and Safety of Mild Therapeutic Hypothermia in Poor-Grade Subarachnoid Hemorrhage: Prospective Pilot Study	In conclusion, in this prospective pilot study, mild TH can be feasible and safely used in patients with poor-grade SAH. The rate of adverse events during TH was similar to standard care of poor grade SAH, therefore TH is an acceptable treatment. We also found that mild TH after successful intervention may reduce the risk of vasospasm and DCI, and lead to improved functional outcomes and reduced mortality in patients with poor-grade SAH. In the future, larger randomized controlled studies should be conducted to determine the safety and clinical impact of TH in poor-grade SAH patients following successful intervention.
Efficacy and Safety of Combination Therapy of Shenfu Injection and Postresuscitation Bundle in Patients With Return of Spontaneous Circulation After In-Hospital Cardiac Arrest: RCT Assessor-Blinded	This study demonstrates that Shenfu injection in combination with conventional postresuscitation care bundle treatment is effective at improving clinical outcomes in patients with return of spontaneous circulation after in-hospital cardiac arrest. (Shenfu is a type of Chinese Medicine that contains ginseng and aconite)
Effect of Depth and Duration of Cooling on Death or Disability at Age 18 Months Among Neonates With Hypoxic-Ischemic Encephalopathy	Among term neonates with moderate or severe hypoxic-ischemic encephalopathy, cooling for longer than 72 hours, cooling to lower than 33.5°C, or both did not reduce death or moderate or severe disability at 18 months of age. However, the trial may be underpowered, and an interaction was found between longer and deeper cooling. These results support the current regimen of cooling for 72 hours at 33.5°C.
Early Use of N-acetylcysteine With Nitrate Therapy in Patients Undergoing Primary Percutaneous Coronary Intervention for ST-Segment–Elevation Myocardial Infarction Reduces Myocardial Infarct Size (NACIAM)	High-dose intravenous NAC administered with low-dose intravenous nitroglycerin is associated with reduced infarct size in patients with ST-segment–elevation myocardial infarction undergoing percutaneous coronary intervention. A larger study is required to assess the impact of this therapy on clinical cardiac outcomes.
Effectiveness of an exercise programme on physical function in patients discharged from hospital following critical illness: a randomised controlled trial (the REVIVE trial)	There was no statistically significant difference in the primary outcome measure of self-reported physical function following this 6-week exercise programme. Secondary outcome results will help inform future studies.
Effect of Abdominal Ultrasound on Clinical Care, Outcomes, and Resource Use Among Children With Blunt Torso Trauma	Among hemodynamically stable children treated in an ED following blunt torso trauma, the use of FAST compared with standard care only did not improve clinical care, including use of resources; ED length of stay; missed intra-abdominal injuries; or hospital charges. These findings do not support the routine use of FAST in this setting.
Randomized Trial of Icatibant for Angiotensin-Converting Enzyme Inhibitor–Induced Upper Airway Angioedema	Icatibant was no more efficacious than placebo in at least moderately severe ACE-I–induced angioedema of the upper airway.
High-Flow Nasal Cannula Versus Conventional Oxygen Therapy in Emergency Department Patients With Cardiogenic Pulmonary Edema: RCT	In patients with cardiogenic pulmonary edema in the ED, high-flow nasal cannula therapy may decrease the severity of dyspnea during the first hour of treatment.
A randomized trial of supplemental parenteral nutrition in underweight and overweight critically ill patients: the TOP-UP pilot trial	Provision of SPN+EN significantly increased calorie/protein delivery over the first week of ICU residence versus EN alone. This was achieved with no increased infection risk. Given feasibility and consistent encouraging trends in hospital mortality, QoL, and functional endpoints, a full-scale trial of SPN powered to assess these clinical outcome endpoints in high-nutritional-risk ICU patients is indicated—potentially focusing on the more poorly EN-fed surgical ICU setting.
Intraoperative Infusion of Dexmedetomidine for Prevention of Postoperative Delirium and Cognitive Dysfunction in Elderly Patients Undergoing Major Elective Noncardiac Surgery	Intraoperative dexmedetomidine does not prevent postoperative delirium. The reduction in delirium previously demonstrated in numerous surgical intensive care unit studies was not observed, which underscores the importance of timing when administering the drug to prevent delirium.
Discriminative Accuracy of Physician and Nurse Predictions for Survival and Functional Outcomes 6 Months After an ICU Admission	ICU physicians' and nurses' discriminative accuracy in predicting 6-month outcomes of critically ill patients varied depending on the outcome being predicted and confidence of the predictors. Further research is needed to better understand how clinicians derive prognostic estimates of long-term outcomes.
A Multicenter, Randomized Trial of Ramped Position vs Sniffing Position During Endotracheal Intubation of Critically Ill Adults	In this multicenter trial, the ramped position did not improve oxygenation during endotracheal intubation of critically ill adults compared with the sniffing position. The ramped position may worsen glottic view and increase the number of laryngoscopy attempts required for successful intubation.
A pilot, prospective, randomized trial of video versus direct laryngoscopy for paramedic endotracheal intubation	In our study utilizing two ground EMS agencies, video assisted laryngoscopy with the KVL had similar first attempt success rates to direct laryngoscopy.
High-flow nasal cannula to prevent postextubation respiratory failure in high-risk non-hypercapnic patients: a randomized multicenter trial	Our study is inconclusive as to a potential benefit of HFNC over conventional oxygen to prevent occurrence of respiratory failure in non-hypercapnic patients at high risk for extubation failure. The study was stopped due to low recruitment after 155 patients were enrolled (78 received high-flow and 77 received conventional oxygen).

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