

Top 5 Renal Papers

Tom Doris

Intensive Care and Home Ventilation

RVI

VANISH

Research

JAMA | Original Investigation

Effect of Early Vasopressin vs Norepinephrine on Kidney Failure in Patients With Septic Shock The VANISH Randomized Clinical Trial

Anthony C. Gordon, MD; Alexina J. Mason, PhD; Neeraja Thirunavukkarasu, MSc; Gavin D. Perkins, MD; Maurizio Cecconi, MD; Magda Cepkova, MD; David G. Pogson, MB BCH; Hollmann D. Aya, MD; Aisha Anjum, BSc; Gregory J. Frazier, MSc; Shalini Santhakumaran, MSc; Deborah Ashby, PhD; Stephen J. Brett, MD; for the VANISH Investigators

VANISH

- 18 ICUs
- Adults with septic shock
- Vasopressin Vs Noradrenaline
- AND Hydrocortisone Vs Placebo



VANISH- Results

- Primary
 - No difference in 28 day survivors who never developed kidney failure
- Secondary
 - Fewer required RRT in vasopressin group
 - But no difference in those with kidney failure
 - More adverse outcomes with Vasopressin

AKIKI

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Initiation Strategies for Renal-Replacement Therapy in the Intensive Care Unit

Stéphane Gaudry, M.D., David Hajage, M.D., Frédérique Schortgen, M.D.,
Laurent Martin-Lefevre, M.D., Bertrand Pons, M.D., Eric Boulet, M.D.,
Alexandre Boyer, M.D., Guillaume Chevrel, M.D., Nicolas Lerolle, M.D., Ph.D.,
Dorothee Carpentier, M.D., Nicolas de Prost, M.D., Ph.D.,
Alexandre Lautrette, M.D., Anne Bretagnol, M.D., Julien Mayaux, M.D.,
Saad Nseir, M.D., Ph.D., Bruno Megarbane, M.D., Ph.D., Marina Thirion, M.D.,
Jean-Marie Forel, M.D., Julien Maizel, M.D., Ph.D., Hodane Yonis, M.D.,
Philippe Markowicz, M.D., Guillaume Thiery, M.D., Florence Tubach, M.D., Ph.D.,
Jean-Damien Ricard, M.D., Ph.D., and Didier Dreyfuss, M.D.,
for the AKIKI Study Group*

AKIKI



- 31 ICUs in France
- Ventilated and/or Vasoactive support
- KDIGO 3
- Within 6 hours of KDIGO 3 vs “Classical” indications



AKIKI Results

- Primary:
 - No difference in 60 day mortality
- Secondary
 - Received RRT 98% vs 51%
 - High rate CRBSI 10% vs 5%

AKIKI Results

- Post Hoc
 - Delayed group who required RRT 61.8%
 - Delayed not requiring 37.1%
 - Early group 48.5%

ELAIN

Research

JAMA | **Original Investigation** | CARING FOR THE CRITICALLY ILL PATIENT

Effect of Early vs Delayed Initiation of Renal Replacement Therapy on Mortality in Critically Ill Patients With Acute Kidney Injury The ELAIN Randomized Clinical Trial

Alexander Zarbock, MD; John A. Kellum, MD; Christoph Schmidt, MD; Hugo Van Aken, MD; Carola Wempe, PhD;
Hermann Pavenstädt, MD; Andreea Boanta, MD; Joachim Gerß, PhD; Melanie Meersch, MD

ELAIN

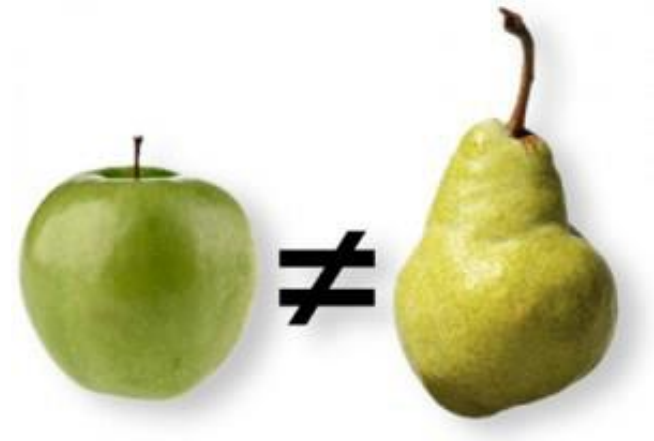
- Single centre, surgical ICU
- KDIGO 2, NGAL > 150
- Shock or Pulmonary Oedema or Other Organ failure
- Within 2 hours of KDIGO 2 Vs 12 hours KDIGO 3 or “Classical” Indication

ELAIN Results

- Primary
 - 90 Day mortality 39.3% vs 54.7%
 - Fragility index 3
- Secondary
 - Shorter duration of RRT in early 9 days vs 25
 - Better renal recovery @ 90 days
 - Shorter mechanical ventilation
 - Less IL-6 & IL-8

ELAIN vs AKIKI

- Intervention arm of AKIKI similar to control of ELAIN
- Different patient groups



SPLIT

Research

Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

Effect of a Buffered Crystalloid Solution vs Saline on Acute Kidney Injury Among Patients in the Intensive Care Unit The SPLIT Randomized Clinical Trial

Paul Young, FCICM; Michael Bailey, PhD; Richard Beasley, DSc; Seton Henderson, FCICM; Diane Mackle, MN; Colin McArthur, FCICM; Shay McGuinness, FANZCA; Jan Mehrrens, RN; John Myburgh, PhD; Alex Psirides, FCICM; Sumeet Reddy, MBChB; Rinaldo Bellomo, FCICM; for the SPLIT Investigators and the ANZICS CTG

SPLIT

- 4 ICUs
- All patients requiring fluid therapy
- Plasma-lyte 148 vs 0.9% Saline

SPLIT Results

- Primary
 - No difference in amount of patients in “Injury” of RIFLE
- No difference in any other measured end point
 - ?Chloride?

AMACING

Articles



Prophylactic hydration to protect renal function from intravascular iodinated contrast material in patients at high risk of contrast-induced nephropathy (AMACING): a prospective, randomised, phase 3, controlled, open-label, non-inferiority trial

Estelle C Nijssen, Roger J Renneberg, Patty J Nelemans, Brigitte A Essers, Marga M Janssen, Marja A Vermeeren, Vincent van Ommen, Joachim E Wildberger

AMACING

- Elective patients having any procedure requiring intravascular contrast
 - “High risk” for CIN
- Excluded ICU patients
- Saline infusion vs nothing

AMACING Results

- Primary
 - No difference in CIN (25% increase in Creatinine)
- 4% of Intervention group developed “symptomatic heart failure” (vs 0%)

Summary (of what I think)

- Vasopressin is no better than Noradrenaline for the kidneys as a first agent
- Patients who don't need RRT do better without it
- If they are going to need RRT, it might be better early (if using IHD)

Summary (of what I think)

- Cardiac surgical patients might do better with very early RRT
- Plasma-lyte is no better than Saline for the kidneys in elective surgical patients
- Pre-hydration is not necessary prior to elective contrast procedures