



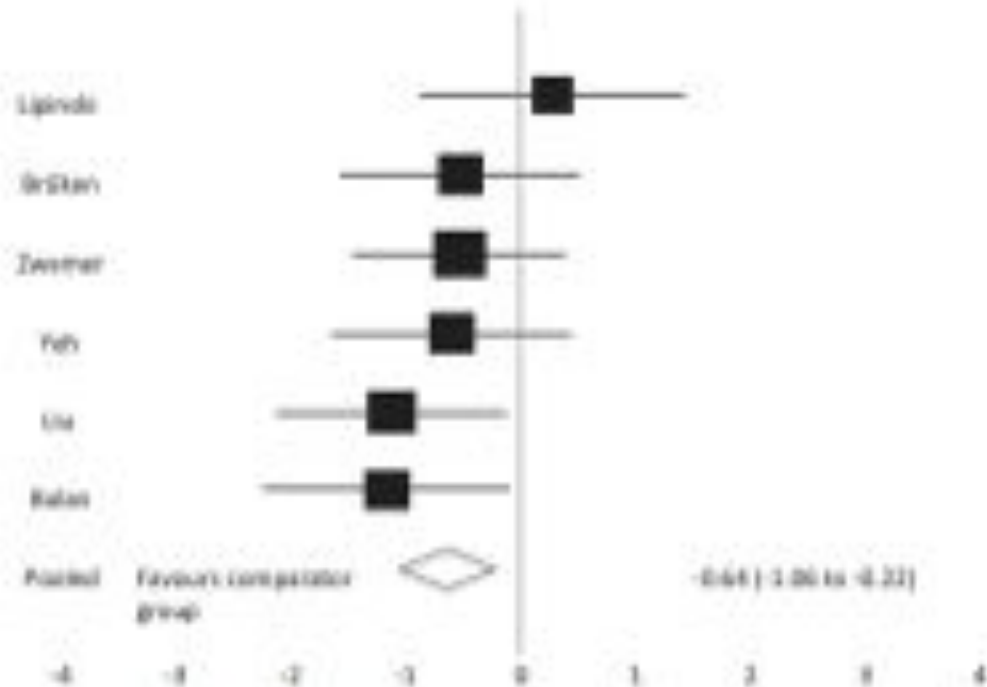
Is exposure to abnormally high levels of oxygen after a cardiac arrest bad for your brain?



Dr Paul Young



Animal studies



Standardised mean difference forest plot comparing neurological deficit scores in hyperoxic and comparator treatment groups. Individual trial and pooled estimates with the size of the boxes on the forest plot inversely proportional to the size of the variance of the study estimates so that more precise studies have larger boxes.

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Learn and Live.

Relationship Between Supranormal Oxygen Tension and Outcome After Resuscitation From Cardiac Arrest

J. Hope Kilgusman, Alan E. Jones, Joseph E. Parrillo, R. Phillip Dellinger, Barry
Mikoeck, Krystal Hunter, Nathan I. Shapiro, Stephen Trzeciak and on behalf of the
Emergency Medicine Shock Research Network (EMShockNet) investigators

Circulation published online May 23, 2011;

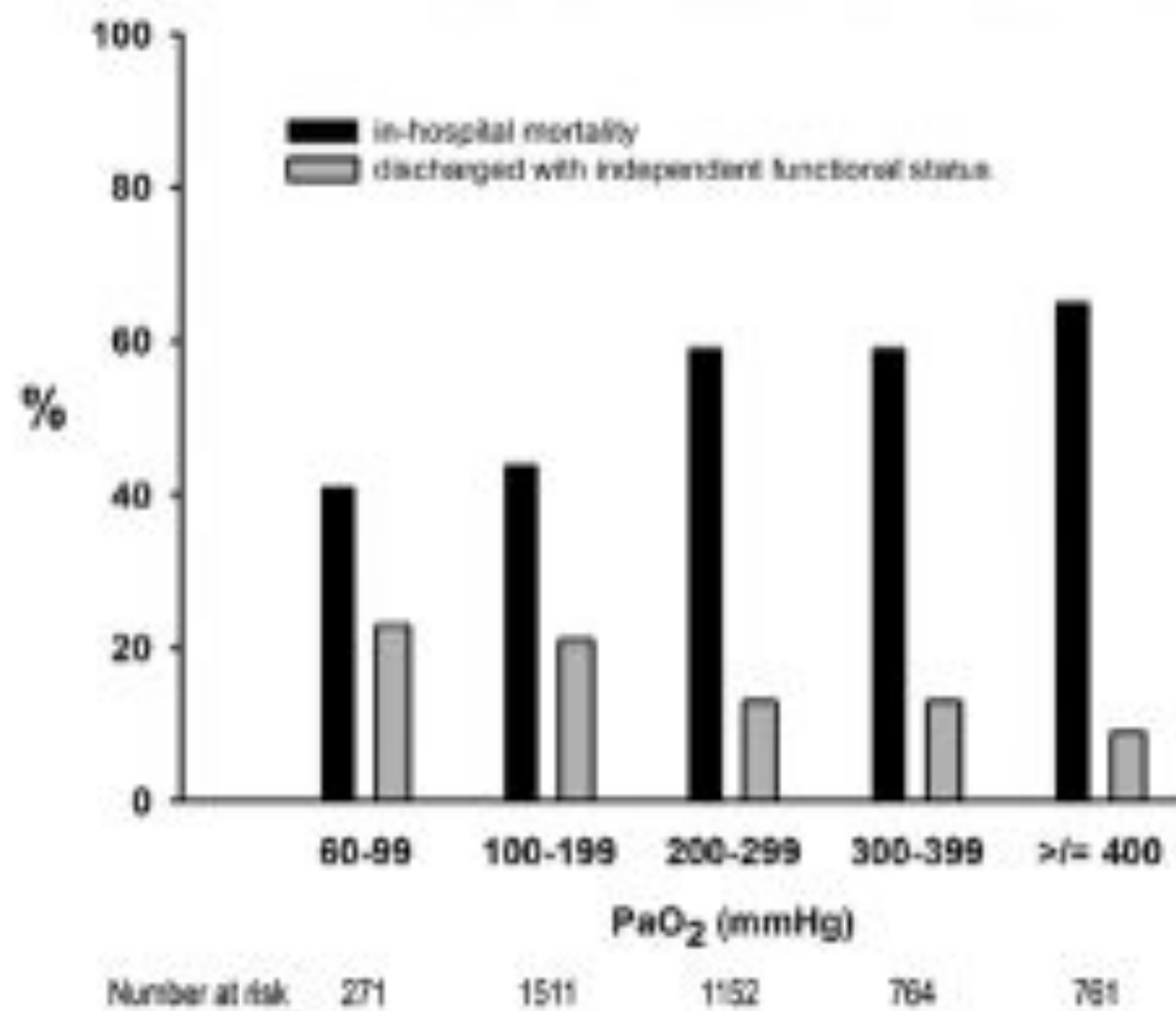
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Randomised trial of titrated
oxygen vs. standard
therapy with high
concentration oxygen

General

- Recruitment by ambulance officers in the community post-ROSC
- An intervention maintained in the community, the emergency department and the ICU.

cardiac arrest due to a 1^o
cardiac cause with an initial
rhythm of VF or VT



Aged 16-90 years

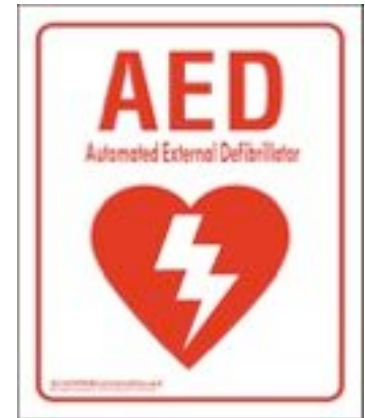


Ventilated via endotracheal tube or laryngeal mask airway



Inclusion Criteria

- Cardiac arrest due to a 1^o cardiac cause with an initial rhythm of VF or VT
- Aged 16-90 years
- Ventilated via endotracheal tube or laryngeal mask airway



obvious pregnancy



dependent on others



terminal disease



Exclusion Criteria

- obvious pregnancy
- dependant on others for activities of daily living (i.e. in supported care or nursing home residents)
- terminal disease
- more than 20 minutes have elapsed since ROSC

standard care vs. titrated oxygen

Standard care

- Oxygen flow into the self-inflating resuscitation bag as high as possible

Titrated oxygen

- On randomisation commence oxygen flow into the self-inflating resuscitation bag at 1L (this corresponds to an oxygen concentration delivered to the patient of about 40%)
- Oxygen flow should be adjusted up or down as required to achieve saturations of 90-94% in the ambulance

Can we achieve separation in oxygen delivery?

- We will compare oxygen saturation levels achieved in the two groups.

Clinical outcome measures

- Proportion of patients with sufficiently good neurological outcome to be discharged home or to a rehabilitation facility
- Quality of life at 6 months

Progress so far

- six randomised
- two patients have survived to hospital discharge; all others died in ICU
- two ineligible patients have been enrolled plus there has been one false start
- in response to the challenges we have modified the randomisation procedure

Questions?

- If you have any questions or suggestions about this study, please e-mail me:

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