



UNIVERSITY *of* MARYLAND
SCHOOL OF MEDICINE

EPR-CAT: Emergency Preservation and Resuscitation for Cardiac Arrest from Trauma

Thomas Scalea, MD
Physician in Chief

R Adams Cowley University of Maryland
Shock Trauma Center

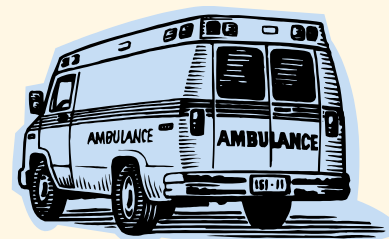
What is EPR?

EPR is a new medical procedure for trauma patients who suffer cardiac arrest due to massive blood loss and have not responded to standard care.



Why should I listen?

- Traumatic injuries, like those caused by car accidents or a shooting, are the leading cause of death in people under the age of 45.
- Any patient arriving at Shock Trauma who suffers a cardiac arrest after a penetrating trauma (such as a gun shot or stab wound) will be eligible to be enrolled in the study.



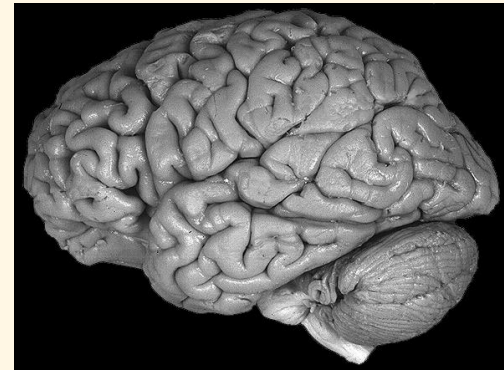
Why do we need EPR?

- Patients who suffer a cardiac arrest from bleeding rarely survive
- Less than 5% survive
- Standard resuscitation techniques don't work

Cooling patients to 50 degrees Fahrenheit may help...

Why use hypothermia?

- Intentional cooling of the brain, other organs and the entire body decreases the need for oxygen and may:
 - Improve chances for survival
 - Prevent organ system failure
 - “Buy time” for surgeons to find and repair injuries



Hypothermia is...

Currently used for cardiac bypass surgery to protect the brain and other organs when blood flow is paused



What is the purpose of the EPR study?

To test the EPR procedure on:

- Severely injured patients
- In cardiac arrest
- With massive blood loss

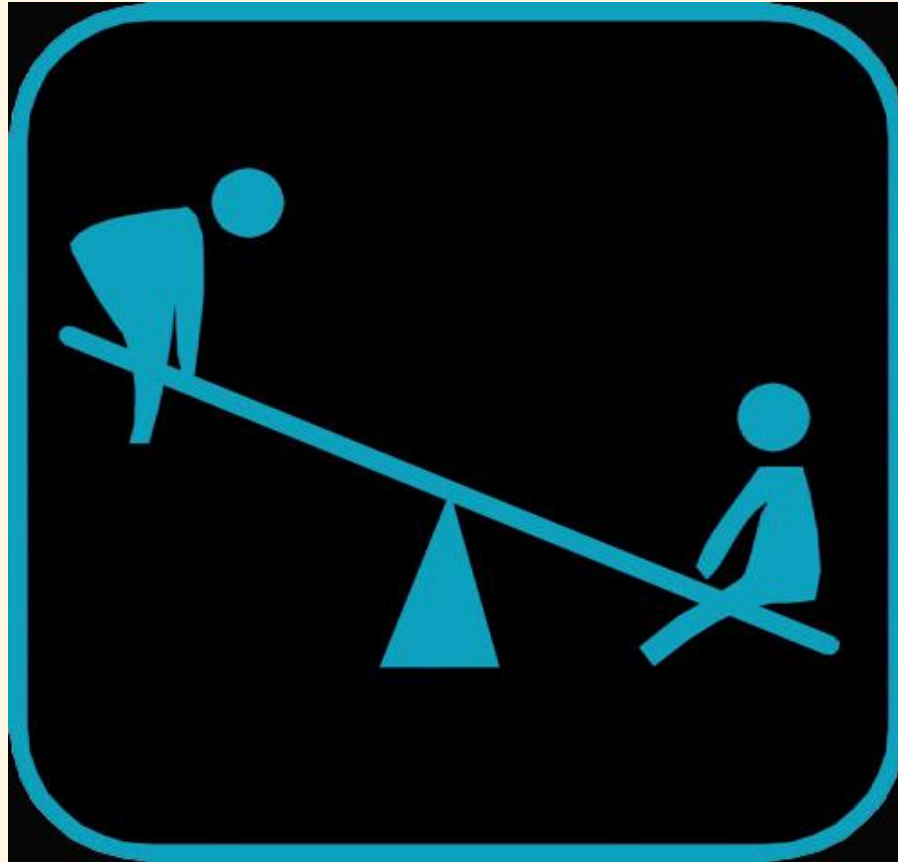
What is the goal of the EPR Study?

- To improve survival for accident victims at risk of death from:
 - Cardiac arrest
 - Massive blood loss

Emergency Research: How it's Different

- Impossible to obtain permission or consent in emergency situations
- Need to balance patient safety & improved patient care
- Need to inform the community and gather public opinion
- Enrolled patients can withdraw at any time
- Community members can “opt-out” in advance

Risks and Benefits



Potential Risks

- Device malfunction
- Abnormal cardiac rhythms
- Sepsis
- Stroke
- Blood clots
- Bleeding
- Organ failure
- Victims may survive with brain damage
- Death

Potential Benefits

- Given the severity of these injured patients EPR may increase their survival rate
- EPR patients would have otherwise died – fewer than 5% generally survive



Disclosure

One of the co-investigators conducting this research (Samuel Tisherman, MD) has a financial interest in intellectual property for the development of the EPR procedure and some of the associated hardware including special catheters and accessories which have been licensed to EPR Technologies. This means that it is possible that the results of this study could lead to personal profit for the individual investigator. This project has been carefully reviewed to ensure that patients' well-being holds more importance than any study results. Dr. Tisherman will not be involved in the recruitment of research participants, and will not administer the informed consent process.

Want to learn more?

- Visit us at <http://www.EPRstudy.com>
- Register an opinion at open community meetings

- Contact:

Leslie Sult

Clinical Research Nurse

University of Maryland School of Medicine

410-328-3272

lsult@stapa.umm.edu

Sponsored By:

- Department of Defense's Telemedicine and Advanced Technology Research Center (TATRC)
- University of Pittsburgh School of Medicine
- R Adams Cowley University of Maryland Shock Trauma Center