UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE

Closure of Pragmatic, Randomized Optimal Platelet and Plasma Ratios (PROPPR) Study

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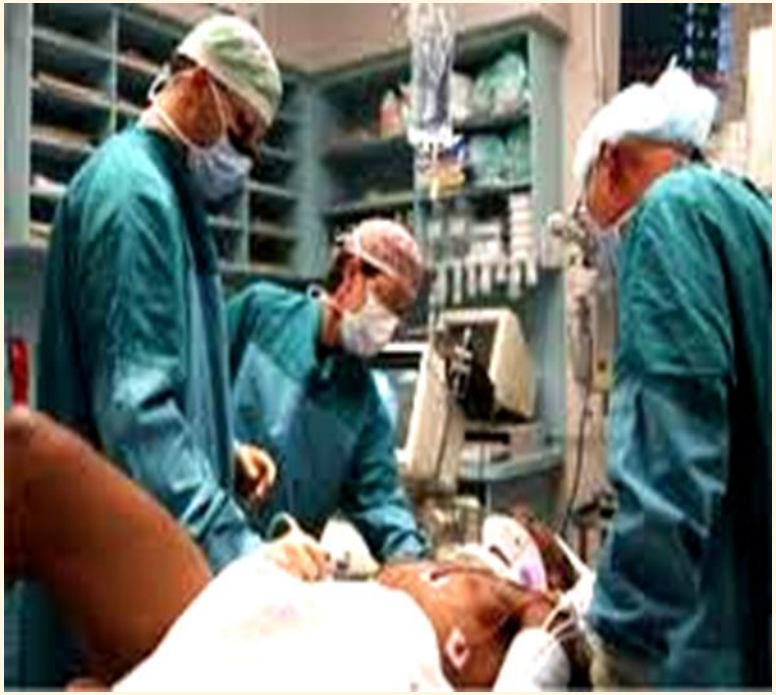
What was the PROPPR study?

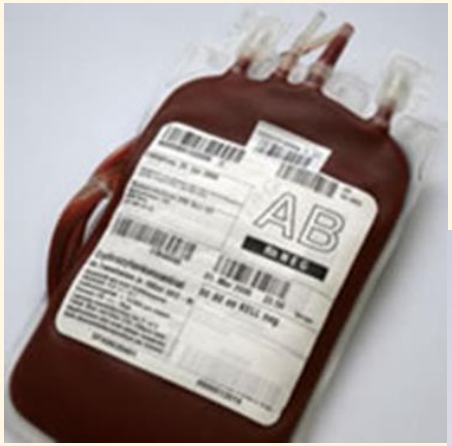
- Conducted between August 2012 and December 2013 at 12 Level 1 trauma centers in North America
- Purpose: To compare two different methods of blood transfusion to learn which one improves survival
- Enrolled patients who were PREDICTED to need a very large amount of blood

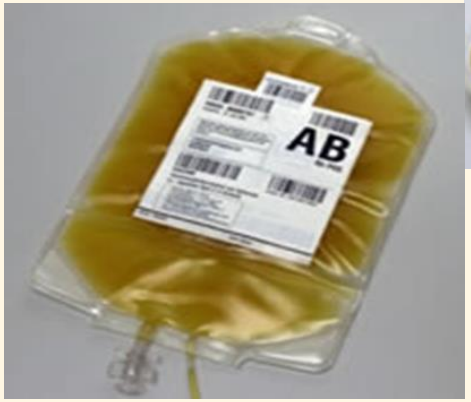
Background



- Nearly 50% of trauma deaths occur before the patient reaches the hospital and few of these deaths are preventable
- For those that reach the hospital, about 40% experience bleeding complications and require a MT (massive transfusion of at least 10 units of blood)
- Bleeding complications are the leading cause of early death in trauma patients

What Are Blood Products?





- When blood is donated, it is divided into its main active parts (or blood products) of plasma, platelets and red blood cells
- Plasma is the liquid portion of the blood; it represents approximately 50% of the total volume of blood and contains coagulation proteins
- Platelets are the smallest structures in the blood and are important for blood clotting and plugging damaged blood vessels
- Red blood cells are cells that carry oxygen

Blood Product Combinations

- Two blood product combinations in widespread use across the United States:
  - Equal ratios of plasma, platelets and red blood cells
  - A ratio that has equal numbers of plasma and platelets, but twice as many red blood cells

PROPPR Study Design

- 11,185 patients screened
- 680 enrolled
  - 338 in 1:1:1 ratio group
  - 342 in 1:1:2 ratio group

Results

- Patients in the 1:1:1 ratio group lived long enough for physicians to stop the bleeding and had a better chance of surviving, in the first 24 hours, compared to patients in the other group
- The two groups had the same overall level of survival at 30 days

Community Notification

- Patients are usually told ahead of time about a research study so they can provide consent before participating
- In an emergency, it is often impossible for patients to give consent
- This study met FDA guidelines to be carried out without first obtaining consent
- People who obtained an opt-out bracelet may discard it at this time

Want to learn more?

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