A New Computer Controlled Balloon Catheter To Improve Treatment For Cardiac Arrest And Massive Bleeding

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ABSTRACT

Background: Trauma is the 4th leading cause of death in Western countries and Cardiac arrest causes up to 7-9 millions death/year and currently only one of ten arrests survive.

Methods: Publication number: 2017015381

Neureuse safeREBOA is the first computer-aided aortic occlusion system that can be used safely with or without fluoroscopy where and when the patient needs it. This enables for the verified, safe emergency redistribution of blood flow to the two most sensitive organs, the heart and brain.

PURPOSE

Today the standard of care for treating cardiac arrest consists of: chest compressions, ventilation and defibrillation.

METHODS

- Redistribution of cardiac output to increase supply to the brain and heart.
- The sensor follow a predefined reaction pattern based on an electrical signal.
- Computer receive patient data which identifies physiological and/or anatomical characteristics

RESULTS

- safeREBOA method: 3 main features
  1. Positioning feedback
  - Computer-assisted positioning feedback protects against inadvertent positioning inside vessels during occlusion with or without fluoroscopy guidance
  2. Automated filling & deflation
  - Automated filling, deflation and balloon pressure adjustment ensures a secure and soft occlusion based on measured pressure from beginning to end of the procedure.
  3. Pressure safety by desing
  - Built-in pressure safety mechanisms protects against manual or automatic over-inflation, rupture and unintended damage as compared to the REBOA field today.

CONCLUSION

The Neureuse safeREBOA device is complimentary to existing treatments as an adjunct to the patients who do not respond to defibrillation.

DISCLOSURES

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