A New Computer Controlled Balloon Catheter To Improve Treatment For Cardiac Arrest And Massive Bleeding: How Does It Work And Results

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On behalf of Habib Frost, MD, Inventor and founder of Neuroscape

Disclosure: Presentation off-label use of

Not intended for human use

Colonel Carl Hughes, Korean war, 1953

7-9 mio. deaths annually

Only 1 out 10 survive today

Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA)
The use of aortic occlusion balloon catheter without fluoroscopy for life-threatening post-partum haemorrhage

Department of Surgery, A. O’Donnell, University Hospital Galway, University College Galway, University of Galway, Galway University Hospital, Galway, Ireland.

Resuscitation or suspended state in cardiac arrest

Sensors Computing

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;

Inventor: Habib Frost
1) Positioning feedback
Computer-assisted positioning feedback protects against inadvertent positioning in side 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 design
Built-in pressure safety mechanisms protects against manual or automatic over-inflation, rupture and unintended damage as compared to the REBOA field today.