It is All about Protecting the Brain: Taking Cerebral Perfusion Management from “Guessing” to “Knowing”

**general**

By fusing light and ultrasound technologies, Ornim Medical provides physicians with the most advanced monitor to direct safe and decisive patient care when the perfusion of brain (and other vital tissues) are at stake. Ornim Medical's validated technology is the key to understanding perfusion. It alerts physicians to variations in blood flow to the brain, enabling informed intervention for better clinical results and patient care. It allows physicians to monitor and maintain constant cerebral blood flow in various clinical scenarios while assisting in safeguarding and protecting brain health. The c-FLOW™ monitor – the first commercially launched device of Ornim Medical's platform technology – is the only FDA-cleared product that enables non-invasive, continuous, direct, real-time, easy-to-use and actionable readings of blood flow changes in the brain.

**vision**

Ornim Medical’s vision as the leader of the standard of care for non-invasive brain (and muscle) tissue perfusion has helped improve care to patients through individualized guidance of therapy targeted at brain protection and the reduction of cerebral morbidity from first response to medical centers and hospitals. c-FLOW™ is a non-invasive and continuous check of deep tissue blood flow used to measure relative changes in blood flow that monitors regional microcirculatory blood flow in tissues, by using sensors placed near the area. Information reflecting real-time changes in the blood flow, suggesting changes in tissue perfusion, is displayed numerically and graphically on the bedside monitor’s screen. As such, the c-FLOW™ monitoring tool can be used to direct safe and decisive patient care when the perfusion of brain tissue is at stake.

**innovation**

In addition to timely alerts provided to attending clinical staff, the c-FLOW™ might minimize potential complications and enhance treatment outcomes. The operation of the c-FLOW™ Blood Flow Monitor is based on Ornim Medical’s patented technology, UTLight™. This revolutionizing technology utilizes weak acoustic beams to identify light emerging from deep tissue layers. Neurocritical Care physicians, surgeons, anesthesiologists and other medical professionals may use the information provided by the c-FLOW™, in conjunction with other available monitoring systems, to determine compromised perfusion rendering intervention and improve patient care.
intended use
The non-invasive c-FLOW™ Blood Flow Monitor is intended to monitor microcirculatory blood flow in the body.

c-FLOW™ - clinical utility
The c-FLOW™ monitor will alert physicians to changes in cerebral blood flow that may have a dismal effect on patient outcome. In conjunction with MAP it may provide an indication of the state of autoregulation. The use of the c-FLOW™ monitor will assist in the dynamic management of blood pressure, CO₂, ICP and other factors influencing CBF and cerebral tissue perfusion. This dynamic management is important in tailoring treatment in the ICU for TBI, SAH, ICH and stroke patients and in the OR for a wide range of patient conditions including CVS, aortic, valves repairs, CEA and various high-risk procedures.

clinical applications
Validation studies demonstrate the performance of c-FLOW™ and its ability to continuously assess changes in local tissue flow, the most important physiological parameter responsible for adequate tissue perfusion. The c-FLOW™ is a bedside monitoring system with interface to the patient of maintenance-free, dry pads. Operation of the system does not require additional personnel. Information presented on the monitor’s screen provides nurses and physicians with timely indications of changes in blood flow, as well as a blood-flow trendline that enables timely and effective decisions by clinical staff.

clinical benefits

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operating room and emergency department

Cardiac and other high risk surgeries - Manage pump flow, blood pressure, CO₂ and other parameters affecting CBF.

Vascular Procedures - Help guide decision-making in intracranial or extracranial revascularization such as carotid endarterectomy and percutaneous angioplasty/stenting. In the case of carotid and endarterectomy, it may suggest the need for shunt and management of blood pressure when augmenting collateral flow.

Cardiac Arrest - To assess adequacy of chest compressions; to determine sufficiency of cerebral blood flow in the setting of anoxic encephalopathy; and to assess CBF during post-cardiac arrest cooling and rewarming.

Orthopedic Surgery - Alerts to changes in CBF following lengthy procedures in beach chair position to avoid stroke and other cognitive impairments.

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Acute Ischemic Stroke - Help guide therapeutic decisions with respect to thrombolytic therapy, revascularization, prognosis and rehabilitation.

Intracranial Hemorrhage - Help guide management of blood pressure, to safely treat perihematomal penumbra and limit risk of re-bleeding.

Cerebrovascular Disease - Monitor response to vasoactive therapy, manage blood pressure and determine outcome.

Traumatic Brain Injury - Help guide management of blood pressure to accomplish CPP goals and to monitor changes compromising CBF.

General ICU - Monitor brain and other organ perfusion, reducing risk for multi organ failure (mainly kidney and liver function).

The c-FLOW™ is FDA cleared for sale in the USA and CE cleared for sale in the European Union.

Ornim: 125 Washington St., Suite 7, Foxboro, MA 02035, USA // Technical support: (US toll free) 866-811-6384 // support@ornim.com // info@ornim.com

Obelis s.a: Bd. Général Wahis 53, 1030 Brussels, Belgium // Tel: +(32) 2.732.59.54 // Fax: +(32) 2.732.60.03 // E-mail: mail@obelis.net