

PULMONARY VENTILATION REGIONALIZATION OPTIMIZATION DEVICE BY TITRATION EXTRATHORACIC POSITIVE PRESSURE

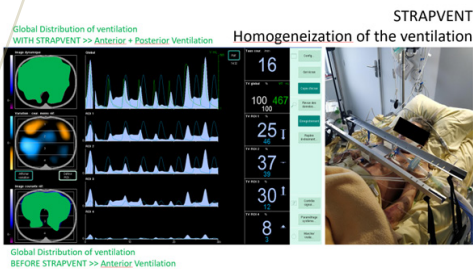
ERG\NEO

L'AVENIR EST FAIT D'AUDACE

PRESENTATION

Lung injury is not homogeneous because lesions are frequently distributed in the posterior regions. This exposes the lungs to inhomogeneous ventilation under mechanical ventilation with risk of overdistension of the anterior and cyclic opening-closing of the posterior regions. These two phenomena can aggravate lung damage and lead to excess mortality. Today, no technical solution allows the homogenization of the pulmonary aeration except the prone position. The research team develops «STRAPVENT», a device whose objective is to apply a titrated compression on the compliant anterior chest wall of the thorax.

This device allows a more homogeneous distribution of ventilation, protecting the anterior areas from overdistension and favoring the redistribution of ventilation towards the posterior regions. Dramatic improvement in the airways mechanics has been reported in patients with ARDS.



Acute Respiratory Distress Syndrome (ARDS) - Respiratory failure
Ventilator induced lung injury - Increased oxygenation performance
Continuous Anterior Chest Compression (CACC)

APPLICATIONS

- Acute Respiratory Distress Syndrome (ARDS)
- Respiratory failure
- Mechanical ventilation
- Diagnostic and therapeutic apps

INTELLECTUAL PROPERTY

Patent filed (WO2019/048774, Priority 09.2017) & delivered (CH, US, EU)

CONTACT

+33 (0)1 44 23 21 50
industriels@erganeo.com
Ref. project : 413

COMPETITIVE ADVANTAGES

- Increased ventilation oxygenation performance
- Reduction of damage induced by mechanical ventilation
- Diagnosis: detects hidden overdistension
- Reduced duration of mechanical ventilation
- Increased patient survival rate
- Reduced ventilation costs

DEVELOPMENT PHASE

- ✓ 2 prototypes developed to date
- ✓ Validation of the cadaveric model (collaboration with the University of Quebec & International Association)
- ✓ Several promising reports in patients
- ✓ Several physiological and clinical evaluations in progress (20 patients per study)

PUBLICATIONS

Papazian L, Aubron C, Brochard L, Chiche JD, Combes A, Dreyfuss D, Forel JM, Guérin C, Jaber S, Mekontso-Dessap A, Mercat A, Richard JC, Roux D, Vieillard-Baron A, Faure H. Formal guidelines: management of acute respiratory distress syndrome. *Ann Intensive Care*. 2019 Jun 13;9(1):69. doi: 10.1186/s13613-019-0540-9. PMID: 31197492; PMCID: PMC6565761.