

Title (en)
DEVICE AND METHOD FOR ALTERNATELY MEASURING THORACIC PRESSURES AND FOR SEALING OESOPHAGEAL SECRETION

Title (de)
VORRICHTUNG UND VERFAHREN ZUR WECHSELWEISEN MESSUNG THORAKALER DRUCKE UND ZUR ÖSOPHAGEALEN SEKRET-DICHTUNG

Title (fr)
DISPOSITIF ET PROCÉDÉ POUR EFFECTUER DES MESURES ALTERNÉES DE PRESSIONS THORACIQUES ET ASSURER L'ÉTANCHÉITÉ VIS-À-VIS DE SÉCRÉTIONS OESOPHAGIENNES

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Abstract (en)
[origin: WO2021229552A1] The present invention relates to a device and a method for alternately measuring the thoracic and pleural pressure and for gastropharyngeal or tracheal sealing, wherein the balloon component of a tube or catheter placed in the trachea or oesophagus alternates between two filling or functional states, wherein the filling state of the balloon component in the measuring mode assumes a value of constant, defined volume during the measurement, said value corresponding to a flaccid filling state, and the filling state of the balloon in the oesophageally or tracheally sealing functional mode maintains a constant, sealing pressure specified by the user. The controller device connected to the tube unit or catheter unit ensures rapid displacement of filling medium into and out of the tube balloon or catheter balloon in the state of tracheal or oesophageal sealing, wherein the tracheally or oesophageally sealing target pressure is maintained continuously by compensating pressure fluctuations in the balloon caused by respiratory mechanics by a continuous, compensating displacement of filling volume. The user can switch between the two functional states by means of a manual switchover function or by means of a programmable, chronological cycle. In addition to the possibility of an intermittent monitoring of the respiratory mechanics and a continuous, tracheally or oesophageally sealing balloon tamponade, the balloon placed in the trachea or oesophagus allows, in both functional states, the thoracic derivation of a triggering, respiratory-mechanical signal which can trigger a ventilating stroke assisting the patient in a ventilator connected to the device. The invention also describes structural and functional options for the simultaneous derivation of a neural and/or muscular electrical signal from the diaphragm of the patient and a respiratory-mechanical signal on the basis of thoracic or pleural pressure fluctuations derived tracheally or oesophageally.

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