Title (en)
METHOD FOR QUANTIFICATION OF A LEVEL OF RESPONSE TO HYPOGLOSSAL NERVE STIMULATION AND METHOD OF PREDICTING

Title (de)
VERFAHREN ZUR QUANTIFIZIERUNG EINES ANTWORTNIVEAUS AUF HYPOGLOSSALE NERVENSTIMULATION UND VERFAHREN ZUR VORHERSAGE

Title (fr)
PROCÉDÉ DE QUANTIFICATION D'UN NIVEAU DE RÉPONSE À UNE STIMULATION DU NERF HYPOGLOSSE ET PROCÉDÉ DE PRÉDICTION ASSOCIÉ

Publication
EP 4370018 A2 20240522 (EN)

Application
EP 22750698 A 20220712

Priority
• EP 21185093 A 20210712
• EP 2022069421 W 20220712

Abstract (en)
[origin: EP4119038A1] Disclosed herein is a Computer-implemented method for quantification of a level of response to nerve stimulation, the method comprising the following steps:a) transfer a stimulation parameter data to a data processing unit;b) transfer at least a subgroup of physiological data corresponding to a subject to the data processing unit;c) identify at least one physiological signal of the physiological data corresponding to the therapy's impact on the subject's airway opening;d) detect ON-instants and OFF-instants in a defined time segment of the physiological data, wherein each ON-instant corresponds to an instant of time in which the subject was stimulated and wherein each OFF-instant corresponds to an instant of time in which the subject was not stimulated;e) detect at least one breath cycle;f) for each breath cycle detected, analyze an airflow segment and check if it was synchronized with an ON-instant or with an OFF-instant;g) sort each airflow segment into one of two groups based on its respectively checked synchronization with an ON/OFF-instant, the two groups being an ON-group comprising airflow signals that are synchronized with ON-instants and an OFF-group comprising airflow signals that are synchronized with OFF-instants;h) for each of the two groups, separately determine an airflow curve from all airflow segments of each respective group;i) calculate an volume of air for each of the two airflows;j) determine an impact of stimulation based on visualization of the two airflows and/or on a ratio of the two volumes.

IPC 8 full level
A61B 5/00 (2006.01); **A61B 5/08** (2006.01)

CPC (source: EP)
A61B 5/0826 (2013.01); **A61B 5/4818** (2013.01); **A61B 5/4836** (2013.01); **A61B 5/4848** (2013.01); **A61B 5/7278** (2013.01); A61B 5/4052 (2013.01)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4119038 A1 20230118; AU 2022309958 A1 20240215; CA 3225223 A1 20230119; CN 117881332 A 20240412; EP 4370018 A2 20240522; JP 2024524612 A 20240705; WO 2023285441 A2 20230119

DOCDB simple family (application)
EP 21185093 A 20210712; AU 2022309958 A 20220712; CA 3225223 A 20220712; CN 202280049607 A 20220712; EP 2022069421 W 20220712; EP 22750698 A 20220712; JP 2024501117 A 20220712