

Optimization of Bi-Pap and PEG intervention protocols for Amyotrophic Lateral Sclerosis

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USA

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2

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Research Abstract

R03 Proposal- Optimization of Bi-Pap and PEG intervention protocols for Amyotrophic Lateral Sclerosis Abstract/Summary The positive impact of the use of bi-level positive airway pressure (Bi-Pap) as a respiratory intervention and percutaneous endoscopic gastronomy (PEG) as nutritional support intervention in Amyotrophic Lateral Sclerosis (ALS) has been well cited. While a few clinical guidelines regarding the use of Bi-Pap and PEG exist, there remains a level

of uncertainty and apparent inconsistency regarding the perceived optimal implementation of the aforementioned interventions, largely due to outcome variance caused by small study sizes and inherent heterogeneity among patients. In this R03 application, we propose secondary analysis of our existing novel 1,587-patient ALS clinical informatics database, which includes over 300 different fields of quantitative and qualitative measures, to optimize Bi-Pap and PEG intervention protocols as function of patient characteristics and quantitative in-clinic measures. As such, the proposed project entails an in-depth analysis of data featuring sample sizes several times larger than previous studies in the published literature. We utilize a combination of traditional approaches (e.g. analysis of variance (ANOVA), chi-squared test, Kaplan-Meier), novel statistical techniques (relational analysis), and big data techniques (hierarchical clustering, Bayesian Networks, Forest Plot) to identify the optimal point in disease progression at which these treatment modalities should be implemented as well as ascertain optimal usage parameters and outcome predictors.

Further information available at:

Types:

Investments < €500k

Member States:

United States of America

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

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