PERSONALIZED MEDICINE, ASTHMA AND ALLERGY

Project title
“Electronic referral based hub & spoke network model for the management of severe asthma”

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Laboratory name: Personalized Medicine, Asthma and Allergy

Abstract
Asthma is an inflammatory disorder with a significant impact on individuals in terms of quality of life. The treatment of asthma consists of both pharmacological and non pharmacological interventions. The latter may consist in many aspects including education and various forms of pulmonary rehabilitation that comprises breathing exercises (BE), inspiratory muscle training (IMT) and physical training (PT). High intensity interval training (HIIT) is a form of interval training alternating short periods of intense anaerobic exercise (80-90% of Heart rate max) with less intense recovery periods. There is no data about HIIT in asthmatic patients.

The aim of this study is to analyze the impact of physiotherapist approach, including HIIT, in patients with moderate uncontrolled asthma.

Main technical approaches
- Lung function tests (spirometry, plethysmography, bronchodilation test, DLCO);
- Exhaled nitric oxide (FENO), and its alveolar (CalvNO) and bronchial (JawNO) components
- 6-Minutes Walking Test (6MWT)
- VO2max
- Exhaled Breath Condensate (EBC) collection and determination of the concentration of biomarkers in EBC (nitrates, nitrites, Cys-LTs, 8-isoprostane);
- Patients Reported Outcomes (PROs): Asthma Control Test (ACT), Asthma Quality of Life Questionnaire (AQLQ), Rhinitis and Asthma Patient’s Perspective (RAPP), Attachment Style Questionnaire (ASQ), Moriski Medication Adherence Scale (MMAS), Illness Perception Questionnaire (IPQ)
- Pulmonary rehabilitation;
- High intensity interval training (HIIT)

Scientific references