

IMPROVEMENT OF LIFE QUALITY IN CHILDREN WITH CYSTIC FIBROSIS BY THE IMPLEMENTATION OF A NEW STRATEGY REGARDING PHYSICAL THERAPY BASED ON INCENTIVE TECHNIQUES AND INDIVIDUALIZED PHYSICAL TRAINING

Goal of the project

In terms of research, the project aims to increase the quality of life for young Romanian people with CF by implementing a new strategy based on physical therapy and incentive techniques. The goals are:

- Creating a research program that aims to optimize physical therapeutically intervention in patients with cystic fibrosis,
- Building an interdisciplinary team,
- Validation of a complex physical therapy protocol,
- Increase the international visibility of the research team and UPT.

Short description of the project

We believe that by developing a protocol based on the combination of incentive techniques, respiratory clearance techniques, and individual physical training, we will increase the quality of life. We conducted a study lasting 25 months which will include 40 subjects aged between 14 and 18 years, diagnosed with CF and whom have the agreement of their legal gardiens to participate in this research project. subjects will be randomly assigned into: groups (study) - they will make individualized physical training based on the modern technologies available in the project (multi-bio-impedantometry, dynamometer, myotest systems and monitoring heart rate with pulsmeters); incentive therapy techniques (using device Trainair) and respiratory clearance; and group c (control)- they will follow standard physical therapy programs conducted in the national center for CF, with no incentive therapy techniques. the initial evaluation will be followed by reassessment of the same parameters at 6, 12 and 24 months. The design and monitoring of physical therapy programs will be based on data provided by the initial assessment and re-evaluations during the semester.

Project implemented by

UEFISCDI and University Politehnica of Timisoara

Implementation period

01.08.2010-31.07.2013

Main activities

Assessment of the patients: somatometric examination and evaluation of body composition by multifrequent impedantometry, determination of maximum muscle force, the evaluation of flows, volumes and rest capacities of the lung, evaluation of the life quality, evaluation of maximum breathing pressure and respiratory muscle training
Design and monitoring of physical therapy programs;
Statistical analysis and interpretation of data;
Participation at international and national conferences;
Publishing the articles and books;
Lecturers at different conferences, organizing conference;
Implementing the protocol into the hospitals and in Romanian National CF Center.

Results

- 1 ISI article with impact factor;
- 5 ISI proceedings;
- 6 international data base;
- 1 monography;
- Award received by UEFISCDI and UPT for the paper: Artificial intelligence techniques: an efficient new approach to challenge the assessment of complex clinical fields such as airway clearance techniques in patients with cystic fibrosis.

Applicability and transferability of the results

Protocol implemented at Romanian National Cystic Fibrosis Center
Transferability of the results to all the patients from Romanian National CF Centre

Recognition by the Romanian Cystic Fibrosis Association
Monography published which becomes the gold standard in CF physiotherapy treatment in Romania.

Fields of interest

- Sport and Physical Education
- Physiotherapy
- Medical
- Adapted Activities for Persons with Special Needs

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Research team

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