European Respiratory Society
Annual Congress 2012

Abstract Number: 4084

Publication Number: P608

Abstract Group: 1.2. Rehabilitation and Chronic Care

Keyword 1: Cystic fibrosis **Keyword 2:** Children **Keyword 3:** Physiotherapy care

Title: Increase motivation and efficiecy in cystic fibrosis teenagers using sport activities, respiratory muscle training and airway clearance techniques

Mr. Bogdan 24130 Almajan-Guta bogdisport@yahoo.com [1], Mr. Claudiu 24131 Avram claudiu.avram@gmail.com [2], Ms. Alexandra Mihaela 24132 Rusu ralexandra83@gmail.com [3], Ms. Ornela Olivia 24133 Cluci ornela_cluci@yahoo.com [3], Dr. Mihaela 24134 Oravitan elle.oravitzan@rdslink.ro [2], Dr. Zoran 24180 Popa zagorcapopa@yahoo.com [4] and Mr. Sebastian 24181 Gheltofan sebagheltofan@yahoo.com [5]. [1] Physical Education and Sport Department, University “Politehnica”, Timisoara, Romania ; [2] Physical Therapy Department, West University of Timisoara, Physical Education and Sport Faculty, Timisoara, Romania ; [3] Physical Rehabilitation, Victor Babes University of Medicine, Timisoara, Romania ; [4] Department of Gynecology, Victor Babes University of Medicine, Timisoara, Romania and [5] Management in Public Nourishment and tourism, USAMVBT, Timisoara, Romania .

Body: Purpose: This study is aiming to demonstrate the efficiency of combined physiotherapy techniques: clearance techniques, respiratory muscle training (RMT) and sport activities, in order to improve clinical outcomes and quality of life in cystic fibrosis teenagers. Method: This prospective study was conducted in the Romanian Cystic Fibrosis Centre and included a number of 40 patients, aged between 12 and 18 years. We have used classic techniques of clearance in the daily physiotherapy: the active cycle of breathing techniques, autogenic drainage, oscillating PEP, high frequency chest wall oscillation (5 times a week), sport programmes (2-4 times a week) and RMT (3 times a week using TrainAir computer system). We have evaluated at baseline and after 24 months of intervention the quality of life (using CFQOL questionnaire) and functional respiratory parameters FVC, FEV_1, $FEF_{25-75\%}$. The statistical processing of data was made using a non-parametric test: the Wilcoxon matched pairs test. Results: On a long term we noticed a substantial improvement in the clinical outcomes (less acute respiratory hospitalization and medication) and CFQOL scores. We also noticed significant statistical difference ($p< 0.05$), from initial vs. final evaluation in de functional respiratory parameters. Conclusions: All cystic fibrosis patients should be encouraged to combine airway clearance techniques with respiratory muscle training and sport activities for better clinical outcomes and quality of life. Funding Acknowledgements: This paper was supported by a research grant from UEFISCDI Romania, code TE 36.