European Respiratory Society
Annual Congress 2012

Abstract Number: 3942

Publication Number: P4148

Abstract Group: 9.2. Physiotherapists

Keyword 1: Cystic fibrosis **Keyword 2:** Bronchiectasis **Keyword 3:** Exercise

Title: Comparison of functional capacity, muscle strength, body composition in patients with cystic fibrosis, non-cystic bronchiectasis and healthy controls

Dr. Meral 28693 Bosnak-Guclu bosnakmeral@hotmail.com [1], Mrs. Melda 28694 Saglam msaglam@hacettepe.edu.tr [2], Mrs. Zeynep 28695 Aribas zozaydin@gmail.com [1], Prof. Sema 28696 Savci semasavci@yahoo.com [3], Dr. Deniz 28697 Inal-Ince dince@hacettepe.edu.tr [2], Prof. Hulya 28708 Arikan harikan@hacettepe.edu.tr [2], Dr. Ebru 28772 Yalcin eyalcin@hacettepe.edu.tr MD [4] and Prof. Dr Ugur 28781 Ozcelik uözcelik@hacettepe.edu.tr MD [4]. [1] Department of Physiotherapy and Rehabilitation, Gazi University, Faculty of Health Sciences, Ankara, Turkey ; [2] Department of Physiotherapy and Rehabilitation, Hacettepe University, Faculty of Health Sciences, Ankara, Turkey ; [3] School of Physiotherapy and Rehabilitation, Dokuz Eylül University, Izmir, Turkey and [4] Department of Pediatric Pulmonology, Hacettepe University, Ihsan Dogramaci Children's Hospital,, Ankara, Turkey .

Body: Aim: We aimed to compare functional capacity, respiratory and peripheral muscle strength, and body composition in patients with cystic fibrosis, non-cystic bronchiectasis and healthy controls. Methods: 43 with bronchiectasis, 36 patients with cystic fibrosis, and 35 age-sex matched controls were included. Body composition was evaluated using bioelectrical impedance analysis. Pulmonary function test was performed. Respiratory muscle strength (MIP and MEP) was evaluated using a mouth pressure device, quadriceps muscle strength using a dynamometer, functional capacity using six-minute walk test (6MWT). Results: The weight, height, body mass index (BMI), and fat free mass, pulmonary functions, MIP and MEP, quadriceps muscle strength, 6MWT distance, were significantly lower in patients with bronchiectasis and cystic fibrosis compared with healthy controls ($p<0.05$). 24 patients (56%) with bronchiectasis, 23 (64%) patients with cystic fibrosis had malnutrition. 12 (28%) bronchiectasis, 16 (44%) cystic fibrosis patients' MIP were weaker than 95%CI (80-150 cmH_2O) of the controls. 8 (19%) bronchiectasis, 8 (22%) cystic fibrosis patients' 6MWT distance were shorter than 95%CI (576-871 m) of the controls. 9 (21%) bronchiectasis, 7 (19%) cystic fibrosis patients' quadriceps muscle were weaker than 95%CI (160-500 N) of the controls. Conclusion: Body composition, pulmonary function, respiratory and peripheral muscle strength and functional capacity are impaired in bronchiectasis and cystic fibrosis patients. Malnutrition may lead these impairments. Pulmonary rehabilitation programs should be adjusted to improve these outcomes.