PREVALENCE OF LOW BONE MINERAL DENSITY AND ASSOCIATED FACTORS IN ADOLESCENTS AND ADULTS PATIENTS WITH CYSTIC FIBROSIS

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Background: Survival of cystic fibrosis (CF) patients has increased, so bone health could be important for the quality of life of affected patients. Several studies described lower bone mass density (BMD) in patients with CF, which increased fracture risk. Objective: The aim of this study was to evaluate the prevalence of low BMD as well as to evaluate the factors associated with bone mass in these patients. Methods: BMD was measured by DXA in lumpar spine (L1-L4), in patients ≤19years-old, or lumbar spine and femur (total and neck) in patients ≥20years-old. Evaluations of nutritional status, biochemical parameters, lung function were performed. Medications were obtained from medical records Results: Fifty-eight patients were included in the study (25 males/33females), mean age 23.9 years (16-53). The prevalence of bone mass below the expected range for age at any site was 20.7%. None of the subjects had history of fracture. Lumbar spine Z-score in FC patients correlated positively with BMI (r=0.3, p=0.001), and with the rate of the predicted FEV1 (r=0.415, p=0.022). Mean lumbar spine Z-score were higher in women (p=0.001), in patients with no pancreatic insufficiency (p=0.032), and in patients with no hospitalization in the last 3 months (p=0.02). BMI (p= 0.001), and sex (p=0.001) were independently associated with the Z-score in the lumbar spine. Conclusion: Low bone mass is a frequent problem in patients with CF, being associated BMI, which could reflect disease intensity, and male sex. A larger effort should be made to keep these patients wellnourished.