

## **OSTEOPOROSIS IN PATIENTS REFERRED FOR LUNG TRANSPLANTATION**

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Osteoporosis is well-recognized complication of lung transplantation that may significantly impair the final result of surgery. We performed a study of bone mineral density (BMD) in 48 patients (35 men, 13 women, mean age 50.5±10.4) referred in 2006-2009 in Dept. Of Lung Diseases in Zabrze for Lung transplantation (LT). Study group consisted of 12 pts with IPF, 15 pts with other form of IIP, 5 pts with sarcoidosis and 16 pts with end-stage of COPD. The bone mineral density (BMD) of the lumbar spine (LS), total hip (TH) and femoral neck (FN) were measured. According to WHO standard (BMD T score < -2.5) patients were divided into group with osteoporosis (OG; 22 patients) and 26 patients without osteoporosis (WOG) with BMD T score > -2.5. OG create 45.8 % of study group. Age, BMI, duration of disease, steroid consumption, 6 minute walking test (6 MWT), lung function tests (FVC, FEV1) and results of blood gasses (PaO<sub>2</sub>, PaCO<sub>2</sub>, pH) were taken into consideration. In OG the most affected was LS (mean T score -2.90±0.8), in WOG the most affected was FN (mean T score -1.30±0.6). In OG we observed significant (p<0.05) higher steroid consumption (13.3 mg/24 h vs 5 mg/24 h), lower distance in 6 MWT (284 m vs 322 m), lower FEV1%pred. (24 vs 39) and FVC%pred. (35 vs 45) and higher PaCO<sub>2</sub> (49 mmHg vs 39 mmHg). We observed no differences in mean age, BMI, PaO<sub>2</sub> and time of diagnosis between OG and WOG. We conclude, that osteoporosis, which occur in almost half of patients referred for LT, influence on lung function and walking ability in patients with end-stage lung diseases referred for LT.