Abstract Group: 1.1. Clinical Problems
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Title: Adipokines in end-stage lung diseases: The crosstalk between bone and adipose tissue

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Body: Aim: investigate the role of the circulating adipokines in formation of osteoporosis in end-stage lung diseases. Materials: Bone mineral density (BMD) at the lumbar spine (LS) and femur neck (FN), adipokines, osteopontine, osteoprotegerin (OPG) and receptor activator of nuclear factor-kB ligand (RANKL), bone biomarkers were determined in 78 patients with end-stage of lung diseases and 65 healthy controls. Results: procollagen type 1 amino-terminal propeptide (P1NP) was higher in lung diseases and osteocalcin was similar between lung and control groups. Type 1 collagen C-telopeptide (CTx) was higher in lung patients and was related to FN (r=-0.62, p<0.01) and with P1NP (r=0.72, p<0.001). Adiponectin, resistin, visfatin, TNF-a, IL-6, osteopontine, RANKL were higher; leptin, OPG were low in lung group. Where were correlations between leptin (r=0.64, p<0.001; r=0.52, p<0.001), adiponectin (r=-0.54, p<0.01; r=-0.47, p<0.01), TNF-a (r=-0.43, p<0.05; r=-0.41, p<0.05) and BMD FN and LS. It was correlation between resistin (r=0.57, p<0.001) in LS. Omentin-1 were correlated with BMD FN (r=0.48, p<0.05), BMI (r=0.58, p<0.01), osteopontin (r=0.46, p<0.05), OPG (p<0.05), osteocalcin (r=0.53, p<0.05) and RANKL (r=-0.52, p<0.05) in lung patients. No correlations were found between visfatin, biochemical, and BMD measures in both groups. Total and active ghrelin (p<0.01) were higher in lung group and associated with BMI (total ghrelin: r=-0.57, p<0.01; active ghrelin: r=-0.48, p<0.05). Resistin had inverse correlations with FEV1%; FEV1/FVC% and positive with BMI. Visfatin was positive correlations with FEV% and TNF-a (p<0.05). Conclusion: our results shows possibly role of adipokines in bone loss in end-stage lung disease.