

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 150

**Publication Number:** P451

**Abstract Group:** 6.1. Epidemiology

**Keyword 1:** COPD - management **Keyword 2:** Comorbidities **Keyword 3:** Elderly

**Title:** Prevalence of osteoporosis in steroid naïve post menopausal women with COPD in Indian subjects

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**Body:** Study Objective: Osteoporosis in elderly female COPD on inhaled or systemic corticosteroids had been reported. We looked into prevalence of osteoporosis by BMD analysis in steroid naïve COPD patients presenting to COPD clinic for first time. Material & Method: Retrospective analysis done by computerized search of patient's OPD records between Jan 10 & Dec 10. 1084 patients visited clinic for COPD and 411 underwent DEXA scan within 2 weeks. 253 post menopausal women identified COPD. 122 were steroid naïve (on rescue salbutamol ± theophylline and no records of using labeled systemic or local steroids). Severity of COPD was classified as per GOLD. Statistical analysis done using one way ANOVA. RESULTS: Of 122 patients with COPD 61 (50 %) had osteoporosis. 6/20 (30%) GOLD stage 1 patients, 23/53 (43.39%) stage 2, 17/27 (62.96%) stage 3 and 15/22 (68.18%) in stage 4 had osteoporosis. Low BMD (T-score at AP spine < -1) was observed in 17/20 (85%) stage 1, 44/53 (83.01%) stage 2, 23/27 (85.18%) stage 3 & 19/22 (86.36%) stage 4. Significantly lower BMD were observed in stage 1 ( $0.88 \pm 0.11$  gm/cm<sup>2</sup>), Stage 2 ( $0.84 \pm 0.19$  gm/cm<sup>2</sup>), Stage 3 ( $0.83 \pm 0.19$  gm/cm<sup>2</sup>) & Stage 4 ( $0.78 \pm 0.16$  gm/cm<sup>2</sup>) compared to normal age matched postmenopausal women ( $1.10 \pm 0.22$  gm/cm<sup>2</sup>) p-value = 0.003, p value < 0.001, p-value < 0.001, p value < 0.001 and p-value < 0.001 respectively. Conclusion: in our subset of postmenopausal steroid naïve COPD women low BMD is seen in 86% of patients being lowest in most severe COPD. Hence, it would be prudent to do DEXA scan at initial visit of such patients particularly in stage 3 and stage 4 COPD, where add-on ICS could worsen BMD.