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Title: Sleep-disordered breathing in idiopathic pulmonary fibrosis

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Body: Aims: Minimal data exists on the prevalence and impact of sleep-disordered breathing (SDB) in patients with idiopathic pulmonary fibrosis (IPF). The aim of this study was to examine frequency of SDB in newly-diagnosed IPF patients and explore associations with lung function. Method: From 2005 – 2009, a cohort of 38 newly diagnosed IPF patients had unattended polygraphy. All patients were diagnosed according to ATS 2000 diagnostic criteria and were not on supplemental oxygen or other treatment. Standard statistical analysis was undertaken using SPSS v. 19 (IBM). Results: Twenty-eight patients were male. There was no significant difference between men and women in terms of age (68sd11 vs. 74sd7 years respectively) or BMI (28sd5 vs. 30sd3.5 kg/m² respectively). Mean %KCO_{pred} was 84sd21, %TLC_{pred} 34sd11 and FEV₁%_{pred} 80sd7 with no significant difference between sexes. Overall, the Apnoea/Hypopnoea index/time in bed (AH) was 6.6 (IQR5-54) and number of 4%SpO₂desats/hr in bed was 29.5 (IQR5-54). Three men had an AH >25, consistent with moderate-severe SDB. The only correlation with lung function and overnight oxygen readings was found between %TLC_{pred} and 4%SpO₂desats/hr in bed ($\rho = -0.4$; $p = 0.04$) and %TLC_{pred} and ODI ($\rho = -0.43$; $p = 0.03$). Conclusions: In this cohort of newly diagnosed IPF patients, the prevalence of significant SDB was low (8%) despite their age and BMI. Our results support previous observations that greater pulmonary restriction (as measured by TLC) might predispose to worsening oxygenation during sleep but do not support the contention that upper airway obstruction in steroid-free patients with IPF is a common problem.