

## **NO GENDER-SPECIFIC DIFFERENCES IN COMORBIDITIES IN PATIENTS WITH COPD AND ALPHA-1-ANTITRYPSINE DEFICIENCY**

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A deficiency in alpha-1 antitrypsin (A1AT) leads to increased activity of proteolytic enzymes. The consequence is a damage of airways and alveoli and, ultimately, the development of emphysema and chronic obstructive pulmonary disease (COPD). Gender-specific differences in terms of comorbidities are still unclear due to the rarity of this genetic autosomal recessive disease. This retrospective observational study was conducted from January 1, 2005, to November 30, 2022, in the Department of Pneumology, Helios University Clinic Wuppertal, University of Witten/Herdecke, Germany. 11 patients with COPD due to A1AT deficiency could be included into the study (6 males, 54.5%; 95% CI 23.4–83.3%) with a mean age of  $53.9 \pm 11.6$  years. The male patients had a normal body mass index  $24.2 \pm 4.7$  kg/m<sup>2</sup>, while female patients were obese  $31.2 \pm 4.87$  kg/m<sup>2</sup> ( $p = 0.054$ ). The majority of women were smokers (female 60.0 % vs male 33.3 %;  $p = 0.567$ ). Furthermore, all females had panlobular emphysema (female 100.0 % vs male 66.7 %,  $p = 0.455$ ). All patients suffered from COPD with males in more severe stages (female 20.0 % vs 50.0 %,  $p = 0.545$ ). No case of liver involvement was observed. All results were not statistically significant. There were also no gender-specific differences in comorbidities.