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Title: Antielastin antibodies in chronic obstructive pulmonary disease

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Body: Introduction Chronic obstructive pulmonary disease (COPD) is characterized by alterations in innate and acquired immune response. We have previously described an increased prevalence of circulating anti-tissue antibodies (AT) in COPD (Nunez et al AJRCCM 2011; 183: 1025). However, their antigenic specificity is unknown. Elastin is a potential antigen because antibodies against it have been described in these patients (Lee et al Nat Med 2007;13:567-569). Hypothesis All patients underwent clinical history, pulmonary function tests and blood collection following the methodology of the PAC-COPD cohort. The AT antibodies described in COPD patients show anti-elastin specificity. Objective To test this hypothesis we studied a cohort of 223 clinically stable COPD patients recruited into the PAC-COPD study (70 ± 8 years, FEV1/FVC 53 ± 13%, FEV1 51 ± 15 %ref, x ± SD) and a control population of 170 blood donors. Material and methods All patients underwent clinical history, pulmonary function tests and blood collection following the methodology of the PAC-COPD cohort. Elastin antibodies were quantified by ELISA. Results 17.6% of the COPD patients showed AT + titres ≥ 1/160; 3.1% of patients with COPD and 4.7% of controls had positive antibodies to elastin (p = ns). Conclusions The antigen specificity of the AT in patients with COPD does not correspond, by and large, to elastin.