

European Respiratory Society Annual Congress 2012

Abstract Number: 211

Publication Number: P2270

Abstract Group: 5.2. Monitoring Airway Disease

Keyword 1: COPD - diagnosis **Keyword 2:** Chronic disease **Keyword 3:** COPD - management

Title: Clinical features of alpha one antitrypsin deficiency in COPD

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Body: Setting: About 1-3% of patients with diagnosed chronic obstructive pulmonary disease (COPD) are predicted to have alpha1-antitrypsin deficiency (A1ATD). Objective: To clinically evaluate and increase recognition of AATD in patients with COPD. Material and methods: Sixty COPD patients were diagnosed on the basis of clinical and pulmonary function tests. They fulfilled the inclusion criteria and divided into group (A) COPD below 40 years (30 cases) and group (B) COPD above 40 years (30 cases). All patients were subjected thorough history taking, radiological examination, blood gas analysis and quantitative measurements of serum alpha-1 antitrypsin by radio-immunoassay. Results: Mean age of group A&B were (44.17±2.75, 61.87±6.04) respectively with (p value <0.001). The mean serum level alpha 1 antitrypsin in group A&B were (185.03±23.00 with only one case deficient&177.53±49.94 with only four cases deficient) respectively without statistical significance. There is significant relationship between the age of the patient and A1ATD, where in deficient patients mean age 39.63±13.66, and in normal patients mean age 50.18±12.06) with (P value 0.02). There is also significant relationship between family history and A1ATD, where in deficient patients 50% of cases (4 cases) had positive family history, in contrast to 11.61% of cases (13 case) of normal patients (p value 0.03). There is no significant difference between deficient and normal group as regards gender distribution, smoking history, symptomatic presentations, physical signs, radiological picture, pulmonary function tests and blood gas parameters. Conclusion: Emphysema at an early age, non smoker with positive family history are clinical features suggestive for A1ATD.