

European Respiratory Society Annual Congress 2013

Abstract Number: 3029

Publication Number: P2094

Abstract Group: 6.3. Tobacco, Smoking Control and Health Education

Keyword 1: COPD - management **Keyword 2:** Smoking **Keyword 3:** Epidemiology

Title: Relationship between the influence of exposure to tobacco smoke and max-IMT, ABI, ratio of EPA / AA in COPD patients

Dr. Akinori 15569 Ebihara akinoriebihara@hotmail.com MD , Dr. Akifumi 15570 Watanabe watapochi@yahoo.co.jp MD , Dr. Asuka 15571 Nagai asuka_nagai@tok.u-tokai.ac.jp MD , Dr. Takayuki 15572 Nakano nakanot@tok.u-tokai.ac.jp MD , Dr. Tokuzen 15573 Iwamoto mail@iwamotoclinic.com MD and Prof. Ichiro 15584 Kuwahira kuwahira@tok.u-tokai.ac.jp MD . ¹ Pulmonary Medicine, Tokai University Tokyo Hospital, Tokyo, Japan, 151-0053 ; ² General Thoracic Surgery, Tokai University Tokyo Hospital, Tokyo, Japan and ³ Medicine, Erimo Town Clinic, Hokkaido, Japan, 058-0204 .

Body: [Background]COPD is positioned as a systemic inflammatory disease. We have previously reported that COPD from early exposure to tobacco smoke may cause an increase of maximum value of the intima media thickness (max-IMT) that correlates with the increase in the prevalence of smoke-related vascular comorbidities. Analyzing the data of the ratio of serum Eicosapentaenoic Acid to Arachidonic Acid (EPA/AA) and Ankle Brechial Pressure Index(ABI), which were useful as an indicator of arteriosclerosis, we examined the correlation between them in this study. [Methods]We identified potential subjects from Erimo town clinic into two groups: G1) history of COPD and sever exposure to tobacco smoke; G2) subjects without COPD and analyzed the measurements max-IMT, EPA/AA and ABI. We defined severe smoke as that Brinkman Index more than 600. [Results]A total of 118 subjects (male 77, female 41) were enrolled into the study after informed consents were obtained. G1 and 2 consisted of 60 subjects (46, 14), 58 subjects (31,27), respectively. Max-IMT in G1 was 1.52 ± 1.29 mm, G2 was 1.38 ± 1.55 mm. ABI in G1:G2 (0.84 ± 1.23 : 0.92 ± 1.73), EPA / AA in G1: G2 (0.44 ± 0.37 : 0.47 ± 0.23). G1 had higher max-IMT when compared with G2. Furthermore, G1 demonstrated significant decline in ABI and EPA/AA, when compared with G2. [Conclusions]In subjects with COPD, sever exposure to smoke in addition to rise in max-IMT, declined ABI and EPA/AA, that promoted atherosclerotic changes, which may increase the likelihood of smoke-related vascular comorbidities such as cardiovascular and cerberovascular diseases.