***Centrilobular emphysema is associated with pectoralis muscle reduction in current smokers without airflow limitation***

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**Supplementary Table S1. Subjects’ characteristics in the subanalysis**

|  |  |  |
| --- | --- | --- |
| 　 | CLE – (n=162) | CLE + (n=51) |
| Sex (male, n[%]) |  140 (86.4) |  46 (90.2) |
| Age (year) |  52.6 (8.2) |  55.1 (7.1) \* |
| Height (cm) |  168.9 (7.0) |  170.6 (6.7) |
| Weight (kg) |  69.4 (12.1) |  68.0 (11.5) |
| BMI |  24.2 (3.6) |  23.3 (3.1) |
| BMI < 18.5 (n(%)) | 5 (3.1) | 3 (5.9) |
| BMI ≥ 30 (n(%)) | 8 (4.9) | 2 (3.9) |
| Waist circumference |  85.8 (10.0) |  83.94 (9.5) |
| Smoking duration (≥ 20 years, n(%)) |  160 (98.8) |  51 (100.0) |
| Daily tobacco consumption(≥ 1pack/day, n(%)) |  53 (32.7) |  25 (49.0) |
| FEV1 (L) |  3.07 (0.62) |  3.02 (0.50) |
| % predicted FEV1 (%) |  96.1 (12.4) |  94.49 (11.6) |
| FVC (L) |  3.84 (0.73) |  3.92 (0.68) |
| % predicted FVC (%) |  96.1 (11.5) |  97.1 (12.8) |
| FEV1/FVC (%) |  79.8 (4.74) |  77.2 (4.30) \*\* |
| PSE (n(%)) |  36 (22.2) |  30 (58.8) \*\* |
| Fast walking habit (n(%)) |  87 (53.7) |  22 (43.1) |
| Regular exercise habit ≥ 30 min/day (n(%)) |  40 (24.7) |  7 (13.7) |
| Physical activity sufficiency ≥ 60 min/day (n(%)) |  51 (31.5) |  17 (33.3) |
| Weight gain +10 kg (n(%)) |  90 (55.6) |  21 (41.2) |
| WBC (/mm3) | 6360 (1859) | 6843 (2397) |
| CRP ≥ 0.1 mg/dL (n(%) |  42 (25.9) |  23 (45.1) \* |
| Total protein (g/dL) |  7.0 (0.4) |  6.9 (0.5) |
| Albumin (g/dL) |  4.4 (0.3) |  4.4 (0.3) |
| LAV% (%) |  1.40 (1.84) |  2.06 (2.81) |

Subjects' characteristics in the subanalysis using the data of the same scanner (Aquilion Prime scanner). Data are expressed as the mean (SD) and n (%). BMI = body mass index, FEV1 = forced expiratory volume in 1 s, FVC = forced vital capacity, CLE = centrilobular emphysema, PSE = paraseptal emphysema, WBC = white blood cell count, CRP = C reactive protein, LAV% = low attenuation volume %. \* p<0.05, \*\* p<0.01 (compared to smokers without CLE).

**Supplementary Table S2. Subanalysis: Multivariable linear regression analysis of smokers whose CT scan was performed using the same scanner (n=213)**

|  |  |  |  |
| --- | --- | --- | --- |
| 　 | Models for PM area | Models for SAT area | Model for BMD |
| Univariable analyses | 　 | 　 | 　 |
| CLE | -0.52\*\* (-0.83, -0.21) | -0.31 (-0.62, 0.01) | -0.48\*\* (-0.79, -0.17) |
| PSE | -0.01 (-0.31, 0.28) | -0.44\*\* (-0.73, -0.15) | -0.21 (-0.50, 0.08) |
| FEV1 | 0.45\*\* (0.33, 0.58) | -0.13 (-0.27, 0.00) | 0.23\*\* (0.09, 0.36) |
| LAV% | -0.12 (-0.26, 0.01) | -0.28\*\* (-0.41, -0.15) | -0.14\* (-0.28, -0.01) |
| Multivariable analyses† |  |  |  |
| CLE | -0.46\*\* (-0.70, -0.22) | 0.02 (-0.18, 0.22) | -0.29 (-0.60, 0.02) |
| PSE | 0.10 (-0.12, 0.33) | -0.15 (-0.33, 0.04) | -0.01 (-0.30, 0.28) |
| FEV1 | 0.16\* (0.01, 0.31) | -0.05 (-0.17, 0.07) | 0.18 (-0.01, 0.37) |
| LAV% | -0.07 (-0.18, 0.03) | 0.03 (-0.05, 0.12) | -0.02 (-0.16, 0.12) |

Univariable and multivariable models were constructed to explore factors associated with pectoralis muscle (PM) area, subcutaneous adipose tissue (SAT) area and bone marrow density (BMD). This table used data from the same scanner (n=213). Values are expressed as standardized estimates (95% confidence interval). \* p<0.05, \*\* p<0.01

† All multivariable models (n=310) simultaneously included centrilobular emphysema (CLE), paraseptal emphysema (PSE), forced expiratory volume in 1 sec (FEV1), LAV% (low attenuation volume %), and basic demographic factors, including age, sex, height, weight and smoking history (duration ≥ 20 years and daily consumption ≥ 1 pack/day), as independent variables. SAT index was log2-transformed to approximate a normal distribution.