Relationship Between Lipid Disorders and Chronic Thromboembolic Pulmonary Hypertension

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Objectives:
Dyslipidemia and Low EPA/AA ratio are recognized as risk factors for coronary artery disease. However, relationship between lipid disorders and chronic thromboembolic pulmonary hypertension (CTEPH) has not been reported yet.
Methods:
The study subjects consisted of 181 consecutive patients with pulmonary arterial hypertension who took a fasting blood test for fatty acid analysis. The patients were divided into CTEPH-group (n=82) and Non-CTEPH-group (n=99) (idiopathic pulmonary arterial hypertension: n=62; connective tissue disease: n=26; congenital heart disease: n=11). Adjusted to age-matched including <40, 40≤<60 or 60≤,, EPA/ AA ratio and lipid profile were compared between the two groups.
Results:
EPA/ AA ratio was significantly elevated according to age in CTEPH-group (<40 vs. 40≤<60 vs. 60≤: 0.18 vs. 0.25 vs. 0.38; p<0.01) but not in Non-CTEPH-group and only in over 60, EPA/ AA ratio was significantly lower in CTEPH-group than in Non-CTEPH-group (p<0.05). Frequency of high LDL cholesterolemia was significantly higher in CTEPH-group than in Non-CTEPH-group (33 vs. 17 %; p<0.05).
Conclusion:
Lipid disorders were associated with occurrence of CTEPH.