European Respiratory Society
Annual Congress 2013

Abstract Number: 509

Publication Number: P3670

Abstract Group: 1.1. Clinical Problems

Keyword 1: COPD - diagnosis **Keyword 2:** Sleep studies **Keyword 3:** No keyword

Title: How does aerodynamic peculiarities of upper airways influence heart rhythm in severe COPD patients

Prof. Dr Yuri 4551 Feshchenko diagnost@ifp.kiev.ua MD [1], Prof. Dr Liudmyla 4552 Iashyna diagnost@ifp.kiev.ua MD [1], Dr. Viktoria 4553 Ignatieva diagnost@ifp.kiev.ua MD [1], Dr. Svitlana 4554 Moskalenko diagnost@ifp.kiev.ua MD [1], Dr. Inna 4555 Zvol diagnost@ifp.kiev.ua MD [1] and Dr. Irina 4556 Chumak diagnost@ifp.kiev.ua MD [1]. [1] Diagnostic, Therapy and Clinical Pharmacology of Lung Diseases, State Organization "National Institute of Phthisiology and Pulmonology Named after F.G.Yanovsky NAMS of Ukraine, Kiev, Ukraine, 03680 .

Body: The aim: to study the interrelation between aerodynamic peculiarities of upper airways and 24-hour Holter monitoring data in severe COPD patients. Patients and methods: 60 patients (45 male and 15 female aged 41 - 79) with severe COPD (Post BD FEV1– (41,6 ± 2,1)%) were examined with active anterior rhinomanometry, spirometry ("Master Screen PFT", "Cardinal Health" (Germany), 24-hour EC Holter monitoring («EC2H» “Labtech” (Hungary), statistic data. Results of the study: in 49 patients (81,7 %) vasomotor rhinitis was diagnosed. In 44 (73,3 %) patients it was complicated by hypertrophy of lower rhino bone and in 30 (50,0 %) patients - complicated by deviated septum. After the correlation analysis the statistically reliable feedback of middle rate was found between total nasal expiratory flow (TNEF) and ventricular contractions (per cent of night ones) – ($r = – 0,449$, $p < 0,05$), between TNEF and supraventricular extrasystoles (per cent of night ones) – ($r = – 0,474$, $p < 0,05$). The following correlation was observed: the lower TNEF index was, the more frequent night heart rhythm failure occurred. Conclusion: presence of chronic vasomotor rhinitis with hypertrophy of lower rhino bone and deviated septum in severe COPD patients led to aerodynamic violation of upper airways on expiratory flow and to impact on the occurrence and frequency of the night heart rhythm failure.