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Title: COPD: Acute exacerbation (AE) rate and saturation in the patients with different plasma surfactant protein D (SP-D) level

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Body: Aim To evaluate whether and in which extent SP-D have influence on the AE rate and saturation in patients with COPD. Study population 26 patients with stable COPD, GOLD stage II-IV, made the study sample. Methods Saturation by pulse oximetry and SP-D in plasma by ELISA (Hycult Biotech, Netherlands) was evaluated in all patients. AE required systemic corticosteroids (SCS) and/or antibiotics (AB) prescription during 12 months were evaluated retrospectively by analysis of patient's medical documentation. Results In accordance with SP-D level all patients were divided on two groups: 12 patients with SP-D < 600 ng/ml (Group I) and 14 – with SP-D [≥] 600 ng/ml (Group II). Both groups were similar regarding to sex, age, FEV₁, smoking status and basic therapy. One or more AE during the year were found in 7 (58.33%) patients of Group I and 12 (85.71%) – of Group II. The data from patient's medical documentation analysis are performed in the table 1.

Group	AE (M±m, cases per year)	Oxygen Saturation (Med (25-75%), %)
I	1.04±0.27	98.00 (97.00-98.50)%
II	2.35±0.34*	93.00 (92.00-97.00)% §

*p <0.01; §p = 0.001

Conclusions 1. COPD patients with high plasma SP-D had higher AE rate and required more frequent SCS and/or AB prescription. 2. Stable COPD patients with high plasma SP-D had significantly lower saturation.