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Title: Is hyaluronic acid (HA) a marker of effectiveness of anti-inflammatory therapy in COPD patients?

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Body: HA is considered by some researchers as one of the markers of inflammation in COPD patients. Aim: to study the diagnostic value of HA in COPD patients and the role of the HA as a marker of the effectiveness of anti-inflammatory therapy in COPD patients. Materials and methods: we studied 51 COPD patients with III stages (FEV1 - 48,39±1,8 % pred), which formed a main group (age - 62,2±1,1 yrs), which are either accepted anti-inflammatory therapy (inhaled glucocorticosteroids (IGCS)) variably or did not take it according to the stage of the disease. The patients were examined twice: at visit 1 - to correct treatment, and at visit 2 - after 3 months after correction of treatment. Measurements included clinical status, spirometry, plasma level of HA. The control group consisted of 13 healthy individuals (age - 53,2±2,8 yrs). Results: we found that on visit 1 the level of HA in main group was significantly higher than in patients of the control group (0,21±0,01 ng/ml comparing to 0,15±0,01 ng/ml) (p<0,05). At visit 2 HA level decreased significantly in all patients comparing to this one on visit 1, it's average rate was 0,16 ng/ml (p<0,05), which corresponded to the level of the control group. Conclusion: the significant decreasing of HA level in COPD patients may be a marker of the effectiveness of anti-inflammatory therapy.