

## INFLUENCE OF SYSTEMIC INFLAMMATION ON SEVERITY OF MENTAL DISORDERS SYMPTOMS IN COPD PATIENTS

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It is a well known fact that COPD is often combined with mental disorders. Unfortunately nowadays the main reason of this disorders in COPD patients is unknown. Systemic inflammation could be a cause of occurrence of mental disorders in patients with COPD.

**Aim:** to study the relationships between the level of systemic inflammation and severity of symptoms of anxiety and depression in COPD patients.

**Materials and Methods:** 37 patients with stable COPD (GOLD II-IV) were examined (male – 33 (89%), female – 4 (11%), age –  $63,0 \pm 0,78$  yrs, FEV<sub>1</sub> –  $52,8 \pm 1,24\%$ ). Methods of examination included general-clinical methods, spirometry, PHQ-9 to indentify symptoms of depression, State-Trait Anxiety Inventory (STAI) to indentify symptoms of anxiety, level of C-reactive protein (CRP), statistical methods.

**Results:** The lack of correlation between severity of symptoms of depression due to PHQ-9 and level of CRP in COPD patients was determined ( $p=0,192$ ).

At the same time the correlation between severity of symptoms of state and trait anxiety due to STAI and level of CRP in this patients was found ( $p=0,033$ ,  $p=0,039$  respectively).

**Conclusions:** severity of symptoms of anxiety in COPD patients may be dependent on level of systemic inflammation.

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## DYNAMICS OF TRANSFORMING GROWTH FACTOR BETA 1 (TGF- $\beta_1$ ) LEVEL IN COPD PATIENTS UNDER COMBINED TREATMENT WITH INHALATION CORTICOSTEROIDS AND LONG-ACTING BETA2-AGONISTS

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It is known, that corticosteroids therapy reduces exacerbation rates in patients with more severe disease and decrease the level of systemic inflammation. But it is unknown about its influence on profibrotic cytokine TGF- $\beta_1$ . **Aim:** to determine the dynamics of serum level of TGF- $\beta_1$  under combined treatment with inhalation corticosteroids and long-acting beta agonists.

**Materials and Methods:** we studied 30 stable COPD patients (age –  $62,4 \pm 1,4$  years, male – 27 (90%)), FEV<sub>1</sub> was  $45,7 [34,8-56,5]\%$  pred. All patients were smokers or ex-smokers, index "pack/year" was  $40,0 [25,0-45,0]$ ). The control group consists of 10 healthy subjects. Measurements included clinical status, spirometry. Serum TGF- $\beta_1$  level was measured twice – at first visit and after three month therapy.

**Results** Serum TGF- $\beta_1$  levels were elevated in COPD patients as compared with healthy controls ( $p = 0,000$ ). After three month therapy with inhalation corticosteroids and long-acting beta2 agonists TGF- $\beta_1$  level was increased, almost twice ( $p = 0,003$ ) (table 1).