

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 866

**Publication Number:** P4118

**Abstract Group:** 5.1. Airway Pharmacology and Treatment

**Keyword 1:** Asthma - management **Keyword 2:** Anti-inflammatory **Keyword 3:** Treatments

**Title:** Study of antioxidant use in patients with asthma exacerbations

Prof. Dr Usman 7319 Farkhutdinov babe@bk.ru MD and Dr. Shamil 7320 Farkhutdinov babe@bk.ru .<sup>1</sup>  
Department of Internal Diseases, City Hospital 21, Ufa, Russian Federation, 450000 and <sup>2</sup> Department of  
Internal Diseases, City Hospital 21, Ufa, Russian Federation, 450000 .

**Body:** Active oxygen forms (AOF) are of great importance in pathogenesis of bronchial asthma (BA). Ceruloplasmine (C) is the basic antioxidant in humans serum and may be useful in the treatment of patients with BA. The aim was to study the effect of C on the production of AOF in in-vitro experiments and in patients with BA. Methods: The method of chemiluminescence (ChL) registration was used to study the effect of various doses of C (0.005 mg/ml, 0.01 mg/ml, 0.05 mg/ml) on the production of AOF in-vitro in the blood of healthy subjects. In the clinical part of the research AOF generation was studied in 40 patients with exacerbations of BA. 20 patients received standard therapy with various basic medications and C inhalations. The other 20 patients received standard therapy and inhalations with placebo. Results: In in-vitro experiments C dose of 0.005 mg/ml decreased ChL intensity of blood by 10.5% ±0.2 (p<0.05), the doses of 0.01 mg/ml and 0.05 mg/ml reduced ChL intensity by 19.1%±0.5 (p<0.05) and 42,5%±2.2 (p<0.01) respectively. In comparison with normal findings ChL intensity of blood in patients with BA was higher by 1.7-times. It indicated increased production of AOF by blood cells. The use of C in patients has decreased generation of AOF in blood and the intensity of clinical symptoms. Patients who received standard therapy demonstrated symptoms of the disease and enhanced ChL intensity of blood for a long time. Conclusion: The study showed that C possesses a marked anti-oxidant activity. Due to this property C improves the effect of treatment of BA exacerbations.