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Title: Achievement of asthma control in patients with cold airway hyperresponsiveness at different variants of basic therapy

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Body: Background: Cold airway hyperresponsiveness (CAHR) modifies the course of bronchial asthma (BA). Optimal strategy of basic therapy in patients with CAHR remains controversial. Aim: To estimate the achievement of the BA control in patients with CAHR at the application of monotherapy by beclomethasone or the combined therapy by budesonide/formoterol. Methods. 59 patients with uncontrolled BA (ACT ≤19 points) at monotherapy with beclomethasone dipropionate more than 4 weeks at the moment of getting into the research were devided into 2 groups: the 1st group included 35 patients with CAHR (ΔFEV_1 in response to 3-minute isocapnic cold air hyperventilation was -19.7±1.06%), 2nd group included 24 patients without CAHR (ΔFEV_1=-6.3±1.11%). Results. At the first 12 weeks of treatment the patients in 1st and 2nd groups took beclomethasone in a doses of 610.6±9.3mkg/day and 576.2±11.4 mkg/day, respectively ($p<0.05$). The part of the patients who achieved asthma control (20-25 points ACT) at the end of the first period was 28% in 1st group and 58% in 2nd group ($p<0.05$). There was no dynamics of CAHR in the 1st group (ΔFEV_1=-18.46±1.02%). Budesonide/formoterol in a stable doze of 320/9 mkg/day was offered to the patients of 1st group at the second 12-week stage of the therapy. As a result the asthma control was achieved in 48% as compared with 50% in 2nd group with the monotherapy with beclomethasone (603.5±12.3mkg/day). After 24 weeks of treatment ΔFEV_1 decreased till -16.81±1.12% in the 1st group. Conclusion. The application of the combined therapy in the stable dose in BA patients with CAHR is associated with the higher frequency of asthma control achievement.