Meeting / Value in Health Info: ISPOR 12th Annual European Congress

Paris, France October, 2009

Code: PRS1

Disease: Asthma

Topic: Clinical Outcomes Studies (COS)

Topic Subcategory: EE

Title: A COMPARISON OF EFFICACY AND SAFETY OF FLUTICASONE WITH

BUDESONIDE AND BECLOMETHASONE IN 1:2 DOSE RATIO IN THE

TREATEMENT OF BRONCHIAL ASTHMA

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OBJECTIVES: This study compared efficacy and safety of fluticasone (FL) with budesonide (BUD) and beclomethasone (BDP) in 1:2 dose ratio in the treatment of bronchial asthma.

METHODS: Comparison was based on randomized controlled trials (RCTs) identified by means of systematic review, carried out according to the Cochrane Collaboration guidelines and Agency for Technology Assessment in Poland. The most important medical databases (EMBASE, MEDLINE and CENTRAL) were searched. Two reviewers independently selected trials, assessed their quality and extracted data. Head-to-head comparisons were performed.

RESULTS: The systematic search retrieved 15 RCTs for comparison FL vs. BUD and 18 RCTs for FL vs BDP, respectively. FL was significantly more effective than BUD in respect to the risk of asthma exacerbations (RR=0.73 [0.59; 0.91]), change in morning Peak Expiratory Flow (PEF) (WMD=8.02 L/min [5.20; 10.85]) and proportion of symptoms-free days (MD=8.00 [2.00; 14.00]). Asthma Symptom Score (ASS) score didn't differ between groups (WMD=-0.24 [-0.52; 0.03]). Safety analysis showed that FL in comparison with BUD increased the risk of hoarsness (RR=1.97 [1.07; 3.62]) and rhinitis (RR=1.90 [1.07; 3.36]) but the incidence of other adverse events was comparable between those drugs. There was no statistically significant difference in risk of asthma exacerbations between FL and BDP (RR=0.84 [0.61; 1.14]). FL was associated with better improvement than BDP in respect to morning PEF (WMD=5.59 L/min [1.84; 9.34]), proportion of symptoms-free days (WMD=6.43 [0.47; 12.39]) and statistically significant reduction in ASS score (WMD=-0.11 [-0.19; -0.03]). No significant differences in safety outcomes were found between FL and BDP.

CONCLUSION: Fluticasone in comparison with budesonide and beclomethasone in dose ratios 1:2 provides improvement in spirometric parameters and in comparison to budesonide descreases risk of asthma exacerbations. Safety profiles of fluticasone seems to be comparable both with budesonide and beclomethasone.