

Risks of long-acting beta-agonists in achieving asthma control

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In early December 2008, the Food and Drug Administration (FDA) held an unusual joint meeting of the Pulmonary–Allergy Drugs Advisory Committee, the Drug Safety and Risk Management Advisory Committee, and the Pediatric Advisory Committee to consider the safety of long-acting beta-agonists (LABAs). LABAs have been approved for use in United States since 1994 and are administered by inhalation, act by effecting prolonged stimulation of the β_2 -adrenergic receptors.

Most patients with asthma who used this medication have improved lung function, and many have diminished symptoms. When LABAs are used together with inhaled corticosteroids the combination reduces severe asthma exacerbation. But, since LABAs were introduced into pulmonary market has been a concern about an enhanced risk of death from asthma. The Salmeterol Multicenter Asthma Research Trial (SMART), conducted to test the safety of the long-acting beta agonist salmeterol, was stopped when an interim analysis showed an enhanced risk of death for patients taking

salmeterol as compared with those taking placebo. The design of SMART Study has been criticized, but new clinical trials to test the safety of LABAs have not appeared. The risk of death associated with salmeterol was about 1 in 700 patient-years of treatment.

Because of these, current treatment guidelines discourage the practice to use LABAs monotherapy in patients with asthma. In 2008 was published a meta-analysis of all clinical trials comparing the effects of combined treatment with inhaled corticosteroids and LABAs with the use of inhaled corticosteroids alone which showed a small, nonsignificant increase in death from all causes among the patients receiving the combined treatment and the role of LABAs in causing them wasn't possible.

The author's conclusion is that until well-designed studies for the safety of LABAs are performed, physicians should continue to use LABAs to treat asthma, but only together with inhaled corticosteroids. In particular, they should be used only in patients for whom other controller medications alone do not provide adequate, rather than optimal, asthma control. □

Comment on the paper:

Drazen J, O'Byrne P – Risks of Long-Acting Beta-Agonists in Achieving Asthma Control. *N Engl J Med* 2009; 360:1671-1672