

UNIT NO. 2

ASTHMA CONTROL: INHALED STEROIDS VS COMBINATION THERAPY

Clinical A/Prof Philip Eng Cher Tiew

ABSTRACT

The Gaining Optimal Asthma Control (GOAL) Study compares the outcome of two strategies in 3,421 patients in 326 centres with uncontrolled asthma at baseline. Patients were of all severities and included those who were on zero to high doses of inhaled steroids. The strategy of combination (fluticasone/salmeterol) was found to be more effective on asthma control compared to the strategy of increasing inhaled steroids (fluticasone) to meet guideline-defined asthma control. More patients achieved total control in the combination group than in the group with fluticasone alone. Control was achieved at a lower steroid dose with combination therapy than with fluticasone alone. The exacerbation rates and improvement in health status were significantly better with combination therapy.

SFP2006; 32(4): 11

THE GAINING OPTIMAL ASTHMA CONTROL (GOAL) STUDY

It has been classically taught that the maximum dose of inhaled steroids that can be safely used per day is 2000 ug of beclomethasone equivalent. Fluticasone is two times more potent than beclomethasone, hence the maximum dose per day is 1000 ug. Recent data, however, seems to show that the improvement in FEV1 reaches a plateau at about 500 ug per day. The Gaining Optimal Asthma Control (GOAL) Study was conducted to answer the question whether a combination therapy (fluticasone/salmeterol) is superior to the strategy of increasing the dose of inhaled steroids (fluticasone) to meet guideline-defined asthma control.

STRINGENT DEFINITION OF ASTHMA CONTROL

The GOAL study is a very important study that compares the outcome of two strategies in 3,421 patients in 326 centres with uncontrolled asthma at baseline. Patients were of all severities and included those who were on zero to high doses of inhaled steroids. The study compared a strategy of either increasing inhaled steroids (fluticasone) versus combination (fluticasone/salmeterol) on asthma control.

PHILIP ENG CHER TIEW, Head & Senior Consultant, Department of Respiratory & Critical Care Medicine, Singapore General Hospital

Very stringent definitions of asthma control were used:

- a) total control is defined as normal PEFr, no symptoms, rescue beta agonist use, night time awakenings, exacerbations, emergency room visits or adverse events for every day of 8 weeks,
- b) well controlled is defined if there was failure to achieve perfect symptom score or rescue beta agonist use over the same duration, and
- c) uncontrolled asthma was defined if there was an adverse event or emergency room visit or severe exacerbation at any time.

The results of the study were as followed:

- a) more patients achieved total control in the combination group than in the group with fluticasone alone;
- b) control was achieved at a lower steroid dose with combination therapy than with fluticasone alone;
- c) exacerbation rates and improvement in health status were significantly better with combination therapy.

COMBINATION THERAPY – MORE EFFECTIVE

The results of this study show that guideline defined control of asthma can be achieved in the majority of patients with uncontrolled asthma with the combination salmeterol / fluticasone. This should be the preferred treatment regime for patients whose asthma is uncontrolled, regardless of their previous inhaled steroid status.

REFERENCES

Bateman E, Boushey H, Bousquet J, Busse W, Clark T, Pauwels R, Pedersen S. Can Guideline-Defined Asthma Control be Achieved? The Gaining Optimal Asthma Control Study. *Am J Respir Crit Care Med* 2004; 170: 836-44.

LEARNING POINTS

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- o The Gaining Optimal Asthma Control (GOAL) study is a very important study that compares the outcome of two strategies in 3,421 patients in 326 centres with uncontrolled asthma at baseline.
 - o More patients achieved total control in the combination group (salmeterol/fluticasone) than in the group with fluticasone alone.
 - o Control was achieved at a lower steroid dose with combination therapy than with fluticasone alone.
 - o Exacerbation rates and improvement in health status were significantly better with combination therapy.
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