AstraZeneca

STUDY REPORT SUMMARY

ASTRAZENECA **PHARMACEUTICALS**

FINISHED PRODUCT: Symbicort
ACTIVE INGREDIENT: Budesonide/formoterol

Study No: NIS-RHR-SYM-2007/1

Developmental phase: Non-interventional study
Study Completion Date: 07/2008
Date of Report: 03/2009

OBJECTIVES:

Primary objective
Primary objective of this non-interventional study was to evaluate efficacy of Symbicort® SMART therapy in adult patients with moderate to severe asthma through:

- follow up of the frequency, type and severity of symptoms through the Asthma Control Questionnaire®
- assessment of the lung function (FEV_1, PEF)
- results of Asthma Control Test®
- follow up of the maximum number of Symbicort® as needed inhalations in one day
- assessment of asthma control by physicians

Secondary objectives
Secondary objectives of this non-interventional study were:

- evaluation of safety of Symbicort® SMART treatment through the number and type of reported adverse events
- assessment of patient's satisfaction with the treatment
- assessment of physician's satisfaction with the treatment

METHODS:

Patient population

This study enrolled both male and female patients, aged 18 years and older, with documented history of moderate or severe asthma who were on Symbicort® therapy for at least 1 month prior to enrolment and who were considered appropriate for Symbicort® SMART therapy by the investigator.

Design

This was 3-months non-interventional, observational study on patients with moderate or severe asthma conducted in accordance with local standard clinical practice and approved SmPC in Croatia.

The study was conducted by 63 investigators at pulmonology wards in Croatia.

There were three scheduled visits: at inclusion, 4-6 weeks after first visit and 12-14 weeks after first visit. The time between the scheduled visits was determined according to standard clinical practice for asthma treatment in Croatia.
During each visit, investigators filled in Case Report Forms for each patient with data on number of inhalations of reliever therapy, data on physicians' and patients' satisfaction with the therapy and with data on adverse event. Lung function has been assessed by measuring FEV_1 and PEF. On all three visits patients completed Asthma Control Questionnaire®.

Study Drug

All patients in this study were treated with fixed combination of formoterol (4,5ug) and budesonide (160ug), taken as both maintenance and reliever therapy in accordance with locally approved SmPC (2x1 or 2x2 inhalations per day as maintenance therapy plus additional inhalations as needed).

Statistical analysis

Descriptive statistical methods were used for data analysis.

RESULTS:

In total, 330 patients were enrolled in the study of which 62% were female. Most patients were between 21 and 62 years old with minor proportions of patients younger than 20 and older than 60 years.

Patients were required to be on Symbicort® SMART therapy for at least 1 month prior to enrolment. At first visit 73% of patients were taking 2x1 inhalation plus as needed inhalations, 22% of patients did not need any additional inhalation per day and 95% of patients who were taking additional inhalation needed less then 5 additional inhalations per day.

Asthma Control Questionnaire (ACQ)
One of the primary outcome variables was follow up of the frequency, type and severity of symptoms through the Asthma Control Questionnaire[♣].
Overall ACQ score decreased from baseline to the Visit 3 for all parameters (asthma awakenings, severity of asthma symptoms in the morning, limitations in activities due to asthma, shortness of breath due to asthma, frequency of wheezing).

Lung function
Assessment of the lung function included FEV_1 and PEF values (see table 1).

Table 1: Mean changes in FEV_1 and PEF between baseline (Visit 1) and Visits 2 and 3

	FEV_1	**PEF**
Visit 1	2.71 L	508 L/min
Visit 2	2.89 L ($p<0.01$)	536 L/min ($p<0.01$)
Visit 3	2.99 L ($p<0.01$)	546 L/min ($p<0.01$)

These results showed statistically significant improvement in lung function during the study.

Asthma Control Test (ACT)
Level of asthma control was assessed with standard ACT test where total control of disease is defined with 25 and minimal control with 5 points. During the study there was significant increase in ACT score from 18.92 points at V1, to 20.5 at V2 and 21.63 at V3 (all $p<0.01$).

Number of inhalations
The number of Symbicort inhalations determines level of asthma control, whereby lower number of inhalations means better asthma control.

During this study there was decrease in total number of as-needed inhalations during last 7 days from average of 6.61 at V1 to 4.58 at V2 and 2.82 at V3 with significant statistical difference between V1 and V3 ($p<0.01$).
Total number of as-needed inhalations per day decreased from average of 2.06 at V1 to 1.61 at V2 and to 1.01 as-needed inhalation at V3. Difference between V1 and V3 is statistically significant ($p<0.01$).
During this study increase in number of days without any additional inhalations was noted from average of 3.08 days in past week at V1, to 3.97 at V2 and 4.39 days at V3 with significant statistical difference between V1 and V3 ($p<0.01$).

Assessment of asthma control by physicians
According to investigators' opinion, asthma control level has increased during this study. At V3 46.04% of patients have been very well controlled compared to 30.79% of patients at V1.

Patients' satisfaction with the therapy

Patients' satisfaction with Symbicort SMART therapy has increased during the study. On baseline 37.5% of patients were very satisfied with treatment and at the end of the study this percentage has increased to 76.1%.

According to patients' opinion Symbicort SMART therapy significantly released asthma symptoms. On V1 57.6% of patients thought that Symbicort SMART therapy relieves symptoms completely and this has increased to 84.2% of patients on V3.

At the end of the study majority of patients considered that asthma did not limit their daily activities (93,3% vs.78.6% at V1).

In addition, there was an increase in patients who considered that Symbicort SMART simplified their asthma treatment (52,5% patients at V1 vs. 74.2% patients at V3).

Adverse event

There was no adverse event reported in this study.