The Impact of Severe Asthma on the Quality of Life: A Systematic Review

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INTRODUCTION

- Asthma is one of the most common long term medical condition, with around 300 million people affected worldwide.
- Asthma is an important contributor to the burden of illness and people with asthma experience poor life satisfaction and require a range of health services to manage their condition.
- Dependence on medication, regular hospital visit, and failure to integrate fully with peers are aspects that could negatively influence the quality of life (QoL).
- Health-related quality of life (HRQoL) instruments used in clinical trials and longitudinal studies to measure the impact of asthma on QoL fall under two categories: disease-specific and generic.
- Disease-specific HRQoL instruments measure the specific impacts of the target disease (e.g. Asthma Quality of Life Questionnaire (AQLQ)) while, generic questionnaires aim to assess the impact of any and all adverse health states on HRQoL, without reference to the impacts of any specific disease (e.g. Short Form Health Survey – 36 (SF-36)).

OBJECTIVES

- What is the impact of severe asthma in symptoms and well-being of adults and children?
- What is the overall impact of HRQoL?
- How is this impact distributed by the different dimensions of HRQoL: Physical Symptoms - e.g. coughing, wheezing, shortness of breath; Physical functioning - e.g. walking upstairs, exercise, sleep disruption; Disability - e.g. restriction in ability to perform normal activities, limited ability for activities of daily living; Psychological – mental and emotional health, behavior; Social - daily role, work, personal relationships.

METHODOLOGY

- A targeted literature search was conducted of the relevant published evidence from the following databases:
  - Embase
  - MEDLINE
- Retained citations and full texts were screened according to the following inclusion criteria:
  - Disease: Severe asthma (both allergic and non-allergic asthma)
  - Patient population: Both adults (≥18 years) and children (6-17 years)
  - Study designs: Both randomized controlled trials (RCTs) and observational studies
- Outcomes: Baseline QoL data either measured on generic scale or disease-specific scale

RESULTS

- AQLQ was the most frequently used scale among the included studies, assessed in 13 studies followed by St George’s Respiratory Questionnaire (SGRQ) in six studies
- Higher proportion of adult patients were receiving inhaled corticosteroids (ICS) + Long-acting beta-agonists (LABA) (35.4% - 100.0%) followed by ICS (74.4% - 84.0%), and Short-acting beta-agonists (SABA) (24.1% - 45.1%)
- Most common pharmacological treatments prescribed in children were ICS (100%) followed by LABA (87.0% - 96.0%) and anti-leukotrienes (71.0% - 100.0%)

CONCLUSIONS

- Patients with severe asthma had lower total QoL scores as assessed through different scales, indicating worse QoL.
- Symptoms and activity limitations are the two main domains that potentially affect the QoL in patients with severe asthma.
- Patients with severe allergic asthma have poor QoL as compared to patients with severe non-allergic asthma.
- QoL is largely impaired in children with severe asthma than adolescents.
- Poor asthma control status has a profound negative impact on the QoL in patients with severe asthma.
- Based on severity, patients with severe asthma have rapid deterioration in overall health status as compared to those with mild-moderate asthma.

LIMITATIONS

- Of the included studies, seven studies had low sample size (<50 patients)
- Heterogeneity existed in the included studies with respect to the different point estimates and variance measures employed in these studies for assessing the QoL scores
- Findings may not be generalized due to large variations observed in settings, patient populations and scales assessed.

REFERENCES

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Poster presented at ISPOR 18th Annual European Congress, 7–11 November, 2015, Mico-Milano Congressi, Milan, Italy