THE PREVALENCE OF ASTHMA IN SRI LANKAN ADULTS

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Background and Aims: Data on adult asthma is scarce in Sri Lanka. The objective of this study was to estimate the prevalence of asthma and related symptoms amongst adults in the general population.
Methods: A multi-centered, cross-sectional study was conducted using an interviewer-administered translated version of the screening questionnaire of the European Community Respiratory Health Survey from June to December 2013 in 7 provinces of Sri Lanka. Subjects were selected randomly from different regions by stratified sampling. The prevalence of asthma was defined as "wheezing in the past 12 months (current wheeze)", 'self-reported attack of asthma in the past 12 months' or 'current asthma medication use'.
Results: The study comprised 1872 subjects (45.1% males, 48.8% aged18-45 years) of which 12.2% were current smokers.
In the total population, the prevalence of current wheeze was 23.9% (95% CI: 22.0%-25.9%), of self-reported asthma was 11.8% (95% CI: 10.3%-13.2%) and of current asthma medication use was 11.1% (95% CI: 9.6%-12.5%). The prevalence of asthma according to a positive response to either of the above questions was 31.4% (95% CI: 29.3%-33.4%)
The prevalence of symptoms was higher in adults aged >45 years.
Of those with current wheeze, 60.9% denied a diagnosis of asthma and only 38.2% admitted to use of asthma medication.
In those with current wheeze, wheezing was the only symptom in 19.9% whereas 80.1% had at least one other respiratory symptom (tightness of chest, cough or shortness of breath) of which cough was the most common symptom.
In those without current wheeze, self-reported asthma and current asthma medication use, 30%, 35.9% and 36.6% respectively had at least one other respiratory symptom.
Conclusions: The prevalence of asthma in Sri Lankan adults is high in comparison with global data. A significant percentage of symptomatic individuals deny having asthma and are not on medication.

ASSOCIATION BETWEEN REVERSIBILITY ON SPIROMETRY AND INTERLEUKINS IN ASTHMA WITH FOOD SENSITIZATION

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Background and Aims: Asthma is a common respiratory illness involving airway inflammation and hyper responsiveness. Previously, it was found that 29% asthmatics in India have food allergen sensitization. Serum values of interleukins are raised in patients of asthma. But there is little data about interleukin levels in the Indian asthmatic population with food sensitization. In the present study we looked for any association between inflammatory marker levels and bronchodilator induced reversibility on spirometry in patients of food sensitized asthmatics.
Methods: This was a prospective study, done in the outpatient department at a respiratory speciality hospital. A total of 203 patients diagnosed with bronchial asthma according to GINA guidelines were enrolled. These patients underwent spirometry and reversibility response evaluation, skin prick testing against food allergens, and quantitative serum ILs 4, 5, 6 and 13 levels.
Results: Out of 203 asthma patients, 94 were sensitized to at least one food allergen. On spirometry, 24.5% food sensitized asthmatics showed a positive reversibility response. Patients with reversibility were sensitized to a higher number of antigens (6.8 vs 3.1, p value 0.0018), and had a higher serum IL 5 level (15.4 vs 11.3 pg/ml, p value 0.0428). These patients showed a higher level of IL 13 (29.6 vs 22.1, p value 0.13), and lower values of IL 4 (14.1 vs 15.5, p value 0.57) and IL 6 (35.0 vs 40.8, p value 0.42).
Conclusions: Asthmatic patients with food sensitization who had a positive bronchodilator reversibility response on spirometry were sensitized to

a significantly higher number of allergens. These patients had a significantly higher serum levels of ILs 5 and 13.

ORAL PRESENTATION 18 - CRITICAL CARE MEDICINE

EARLY NON-INVASIVE VENTILATION VERSUS CONVENTIONAL OXYGEN THERAPY IN IMMUNOCOMPROMISED PATIENTS WITH RESPIRATORY FAILURE: A META-ANALYSIS

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Background and Aims: Respiratory failure is common in immunocompromised patients. Intubation and mechanical ventilation (MV) is the mainstay of treatment but is associated with increased risk of pneumonia and other complications. Non-invasive ventilation (NIV) is an alternative to MV in a select group of patients and aims to avoid the complications of MV.
In these patients, we performed a meta-analysis on the effect of early NIV versus conventional oxygen therapy in reducing intubation rates and other important clinical outcomes.
Methods: We performed an extensive online and unpublished data search for relevant studies that met the inclusion criteria. We included randomized controlled trials that used early NIV versus conventional oxygen therapy in immunocompromised patients with respiratory failure. Risk of bias and acceptability assessment were independently performed by the authors.
The primary outcome of interest was intubation and MV rate.The secondary outcomes were ICU and all-cause mortality, ICU length of stay and duration of mechanical ventilation.
Results: Four studies with a total of 553 patients met the criteria for inclusion and were included in the analysis.
Rate of intubation and mechanical ventilation was significantly lower in the patients treated with early NIV versus those given oxygen alone (RR = 0.73[0.59-0.89]). This result of the primary outcome was significantly heterogeneous (I2 = 55%). Upon sensitivity analysis and removal of source of heterogeneity, the benefit of early NIV in reducing intubation and mechanical ventilation rate was preserved (RR = 0.49[0.33-0.73]). Early NIV also significantly decreased ICU mortality rate (RR 0.52 [0.28-0.97]) and ICU length of stay (mean decrease of 1.08days [range 1.50-0.65]). However, it did not decrease all-cause mortality but showed a trend toward reduction (RR = 0.77[0.53-1.11]). It also did not reduce the days on mechanical ventilator (mean decrease of 0.08[range: -0.49-0.33]).
Conclusions: In immunocompromised patients with respiratory failure, early NIV reduced intubation rates and decreased ICU mortality and length of stay compared to standard oxygen therapy.