

**TITLE OF THE PROJECT: Asthma only / COPD without asthma / Asthma with COPD (overlap syndrome).
A comprehensive analysis**

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SUMMARY

Background

Asthma and COPD are both heterogeneous diseases, whereby different phenotypes are likely associated with different environmental and host determinants. Comorbidities are frequent in asthma and COPD. Patients who have both asthma and COPD (overlap syndrome) appear to have a more rapid disease progression, more co-morbidities and health care utilization, than those with either disease alone. However, the joint distribution of asthma and COPD, as well as risk factors and long-term outcomes of the asthma and COPD overlap syndrome have been little investigated in the general population. It is still an open question whether asthma and COPD overlap syndrome is the result of asthma that has progressed to fixed airflow obstruction or a peculiar phenotype. Further research is required to identify factors that may protect asthmatics against progression into COPD, and, more generally, to improve our comprehension of the links between these conditions.

Objectives

The general objective is to study the distribution, natural course, and factors associated with Asthma only/ COPD without asthma/ Asthma with COPD (overlap syndrome). We will (1) assess the joint distribution of asthma and COPD by age and gender, (2) investigate prognosis after 5 years, (3) assess the relationships between asthma/COPD and comorbidities, and associations with risk factors in a comprehensive analysis to identify possible underlying mechanisms/common pathways, and (4) investigate gender differences in association with risk factors, comorbidities, Quality of Life and prognosis and appraise possible gender differential diagnosis.

Methods

Asthma will be defined according to questionnaire. COPD will be defined according to spirometry. Participants will be considered into 4 groups (i) No Asthma, No COPD; (ii) Asthma, without COPD; (iii) COPD without Asthma, (iv) Asthma and COPD. Prevalence by age and gender, and association with co-morbidities and risk factors, will be investigated through cross-sectional analyses of data at inclusion. Prognosis of patients with asthma and/or COPD (and gender differences in prognosis), and temporal relationship between asthma COPD overlap syndrome and co-morbidities and risk factors will be investigated through longitudinal analyses, after 3 and 5 years of follow-up.

Perspectives

Understanding the natural history, risk factors, and pathways involved in these cases of overlapping diseases may have critical implications for their prevention and treatment. A comprehensive analysis of co-morbidities and risk factors associated with asthma only, COPD without asthma, and asthma with COPD shall improve our understanding of the diseases development and progression, and their determinants.

Note: this project is part of the research consortium 'CONSTANCESRespi – Surveillance, determinants, natural history and impact of chronic respiratory diseases and accelerated lung function decline in CONSTANCES - An Integrative project'