

Publication

Longitudinal change of prebronchodilator spirometric obstruction and health outcomes : results from the SAPALDIA cohort

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 1195433

Author(s) Probst-Hensch, N M; Curjuristic, I; Pierre-Olivier, B; Ackermann-Liebrich, U; Bettschart, R W; Brändli, O; Brutsche, M; Burdet, L; Gerbase, M W; Knöpfli, B; Künzli, N; Pons, M G; Schindler, C; Tschopp, J-M; Rochat, T; Russi, E W

Author(s) at UniBasel [Brutsche, Martin](#) ; [Ackermann-Liebrich, Ursula A.](#) ; [Probst Hensch, Nicole](#) ; [Künzli, Nino](#) ; [Schindler, Christian](#) ; [Curjuristic, Ivan](#) ;

Year 2009

Title Longitudinal change of prebronchodilator spirometric obstruction and health outcomes : results from the SAPALDIA cohort

Journal Thorax

Volume 65

Number 2

Pages / Article-Number 150-6

Background Understanding the prognostic meaning of early stages of chronic obstructive pulmonary disease (COPD) in the general population is relevant for discussions about underdiagnosis. To date, COPD prevalence and incidence have often been estimated using prebronchodilation spirometry instead of post-bronchodilation spirometry. In the SAPALDIA (Swiss Study on Air Pollution and Lung Disease in Adults) cohort, time course, clinical relevance and determinants of severity stages of obstruction were investigated using prebronchodilator spirometry. Methods Incident obstruction was defined as an FEV(1)/FVC (forced expiratory volume in 1 s/forced vital capacity) ratio ≥ 0.70 at baseline and < 0.70 at follow-up, and non-persistence was defined inversely. Determinants were assessed in 5490 adults with spirometry and respiratory symptom data in 1991 and 2002 using Poisson regression controlling for self-declared asthma and wheezing. Change in obstruction severity (defined analogously to the GOLD (Global Initiative for Chronic Obstructive Lung Disease) classification) over 11 years was related to shortness of breath and health service utilisation for respiratory problems by logistic models. Results The incidence rate of obstruction was 14.2 cases/1000 person years. 20.9% of obstructive cases (n = 113/540) were non-persistent. Age, smoking, chronic bronchitis and non-current asthma were determinants of incidence. After adjustment for asthma, only progressive stage I or persistent stage II obstruction was associated with shortness of breath (OR 1.71, 95% CI 0.83 to 3.54; OR 3.11, 95% CI 1.50 to 6.42, respectively) and health service utilisation for respiratory problems (OR 2.49, 95% CI 1.02 to 6.10; OR 4.17 95% CI 1.91 to 9.13, respectively) at follow-up. Conclusions The observed non-persistence of obstruction suggests that prebronchodilation spirometry, as used in epidemiological studies, might misclassify COPD. Future epidemiological studies should consider both prebronchodilation and postbronchodilation measurements and take specific clinical factors related to asthma and COPD into consideration for estimation of disease burden and prediction of health outcomes

Publisher British Medical Association

ISSN/ISBN 0040-6376

edoc-URL <http://edoc.unibas.ch/dok/A5843255>

Full Text on edoc No;

Digital Object Identifier DOI 10.1136/thx.2009.115063

PubMed ID <http://www.ncbi.nlm.nih.gov/pubmed/19996350>

ISI-Number WOS:000274398100014

Document type (ISI) Journal Article, Multicenter Study