

Publication

Adenovirus-specific IgG maturation as a surrogate marker in acute exacerbations of COPD

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 3887535

Author(s) Boeck, Lucas; Gencay, Mikael; Roth, Michael; Hirsch, Hans H.; Christ-Crain, Mirjam; Mueller, Beat; Tamm, Michael; Stolz, Daiana

Author(s) at UniBasel Boeck, Lucas ; Müller, Beat ; Hirsch, Hans H. ; Roth-Chiarello, Michael ; Tamm, Michael ; Stolz, Daiana ;

Year 2014

Title Adenovirus-specific IgG maturation as a surrogate marker in acute exacerbations of COPD **Journal** Chest

Volume 146

Number 2

Pages / Article-Number 339-347

Keywords Adenoviridae/*immunology; Adenoviridae Infections/complications/drug therapy/*immunology; Aged; Antiviral Agents/therapeutic use; B-Cell Maturation Antigen/*immunology/metabolism; Biological Markers/metabolism; Enzyme-Linked Immunosorbent Assay; Female; Follow-Up Studies; Humans; *Immunity, Cellular; Immunoglobulin G/*immunology; Male; Middle Aged; Patient Readmission/trends; Prognosis; Pulmonary Disease, Chronic Obstructive/complications/*immunology/mortality; Recurrence; Retrospective Studies; Survival Rate/trends; Switzerland/epidemiology

B cells in airways and lung parenchyma may be involved in COPD evolution; however, whether their pathogenic role is beneficial or harmful remains controversial. The objective of this study was to investigate the maturation of adenovirus-specific immunoglobulins in patients with COPD with respect to clinical outcome.; The presence of adenovirus-specific immunoglobulins during acute exacerbation of COPD (AECOPD) was analyzed at exacerbation and 2 to 3 weeks later. Patients with detectable adenovirus-specific IgM and low IgG avidity were grouped into fast and delayed IgG maturation. The clinical outcome of both groups was evaluated.; Of 208 patients, 43 (20.7%) had serologic evidence of recent adenovirus infection and were grouped by fast IgG maturation (26 patients) and delayed IgG maturation (17 patients). Baseline characteristics, AECOPD therapy, and duration of hospitalization were similar in both groups, but the AECOPD recurrence rate within 6 months was higher (P = .003), and there was a trend for earlier AECOPD-related rehospitalizations (P = .061) in the delayed IgG maturation group. The time to rehospitalization or death within 2 years was shorter in patients with delayed IgG maturation (P = .003). Adenovirus-specific IgG maturation was an independent predictor of the number of AECOPD recurrences within 6 months (P = .001) and the occurrence of hospitalization or death within 2 years (P = .005).; Delayed immunoglobulin avidity maturation following COPD exacerbation is associated with worse outcomes.; ISRCTN Register; No.: ISRCTN77261143; URL: www.isrctn.org.

Publisher Elsevier

ISSN/ISBN 0012-3692 ; 1931-3543 edoc-URL http://edoc.unibas.ch/55857/ Full Text on edoc No; Digital Object Identifier DOI 10.1378/chest.13-2307 PubMed ID http://www.ncbi.nlm.nih.gov/pubmed/24722914 ISI-Number WOS:000340482400041 Document type (ISI) Clinical Trial, Journal Article