ROMANIAN ARCHIVES

OF

MICROBIOLOGY

AND

IMMUNOLOGY

Founded by

PROFESSOR ION CANTACUZINO

VOLUME 65 - Nos. 1-2

January - June 2006

Published quarterly

by

CANTACUZINO INSTITUTE BUCHAREST

TOTAL PUBLISHING HOUSE

ROMANIAN ARCHIVES
OF
MICROBIOLOGY
AND
IMMUNOLOGY

ISSN 1222-3891

INDEXED IN MEDLINE

TOTAL PUBLISHING HOUSE

Subscription orders:
Orders can be placed directly with the publisher:
„Cantacuzino" National Institute of Research-Development for Microbiology and Immunology

C.P. 1-525, Splaiul Independentei 103, 050096, București, Romania,
Fax: (40.21)318.44.14
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EFFECTS OF ATORVASTATIN ON INFLAMMATORY MARKERS ASSOCIATED WITH UNSTABLE ANGINA

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ABSTRACT

Inflammatory reactions in coronary plaques play an important role in the pathogenesis of acute atherothrombotic events. The most powerful class of lipid-lowering drugs available – statins (3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitors) – have additional actions, unrelated to cholesterol reduction, including anti-inflammatory and immunomodulatory properties. A variety of immunologic processes could be influenced by statins: the levels of sICAM-1 and their receptor expression on PBMCs, cytokine secretory capacity of PBMCs and also the seric levels of CRP, lipid peroxides and other inflammatory parameters.

This study sought to determine if atorvastatin affect monocyte activation in patients with unstable angina and mild primary hypercholesterolemia. Following a 4-weeks hypolipemiant-free baseline period, 22 patients-12 with unstable angina (UA) and 10 patients with stable coronary heart disease (SCHD) – were treated with Atorvastatin 20 mg/day. Lipopolysaccharide (LPS)-receptor (CD14) and HLA-DR expression on monocytes and beta-integrins (CD11b, 11c, 49d) on monocytes were measured by flow cytometry before and after treatment with atorvastatin for 8 weeks. Monocyte CD11b, 11c and CD14 expression were significantly ($p < 0,001$) higher in UA patients before treatment when compared with that in SCHD patients. In patients with UA, they decreased markedly with atorvastatin treatment and also the levels of CRP and sICAM-1. LPS-induced IL-1beta and TNF-alpha production capacity of peripheral monocytes, have been analyzed *ex vivo* (4 hours incubation at 37^{0}C), in the presence/absence of atorvastatin (1-10 mM/l). PBMCs induced cytokines production of UA subjects appeared to be similar with controls. Atorvastatin decreased the cytokine production capacity of PBMCs (dose dependently), effect reversed by mevalonate. The reduction in expression of adhesion molecule, the cytokine secretory capacity of monocytes and the serum concentrations of CRP and sICAM-1 may crucially contribute to the clinical benefit of atorvastatin in acute coronary syndromes, independent of cholesterol lowering effects.

ALLOGENIC BLOOD STEM CELL TRANSPLANTATION: THE CURRENT CONCEPT OF DONOR SELECTION IN GERMANY

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ABSTRACT

The total number of first allogeneic hematopoietic stem cell transplantations (HSCT) performed in Germany continuously increased from n = 1.198 in the year 1998 to n = 2.060 in the year 2005. Immunogenetic donor search and donor selection is crucial for the clinical outcome of HSCT. Thus, the Scientific German Society for Immunogenetics (DGI) and the German Working Group for Bone Marrow and Blood Transplantation (DAG-KBT) held a first national consensus conference on immunogenetic donor search in the year 1996. Results of this conference were updated in the years 1999 and 2005. The present talk gives practical recommendations for the following items of donor search and selection. Use of the different search types (core family, extended family and unrelated donor search), HLA matching (loci to be typed, required level of typing resolution for the different loci, acceptable mismatches) and donor selection according to age, sex, CMV serostatus and ABO blood group. An overview on the current literature in the field is included in the talk to support the outlined recommendations.